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ABSTRACT

The assessment and evaluation programs of Colorado, Connecticut, Florida, and Michigan, and the development and implementation of steps they initiated to progress toward the goal of accountability are described in detail in this report. Following the introduction, section 2 discusses the laws enacted by the four states that are the basis for their programs and gives an explanation of the background of the legislation and the content of the statutes. Section 3 demonstrates how the laws are being put into action by each of the states and the changes in policy and strategy that took place since they were enacted. Several tables compare how the states are implementing their programs. Some of the technical, communicative, and political problems are described in section 4. Two appendixes complete the report: an annotated reference list of state agency reports and other materials, and copies of the state laws that are covered. (Author/MLF)

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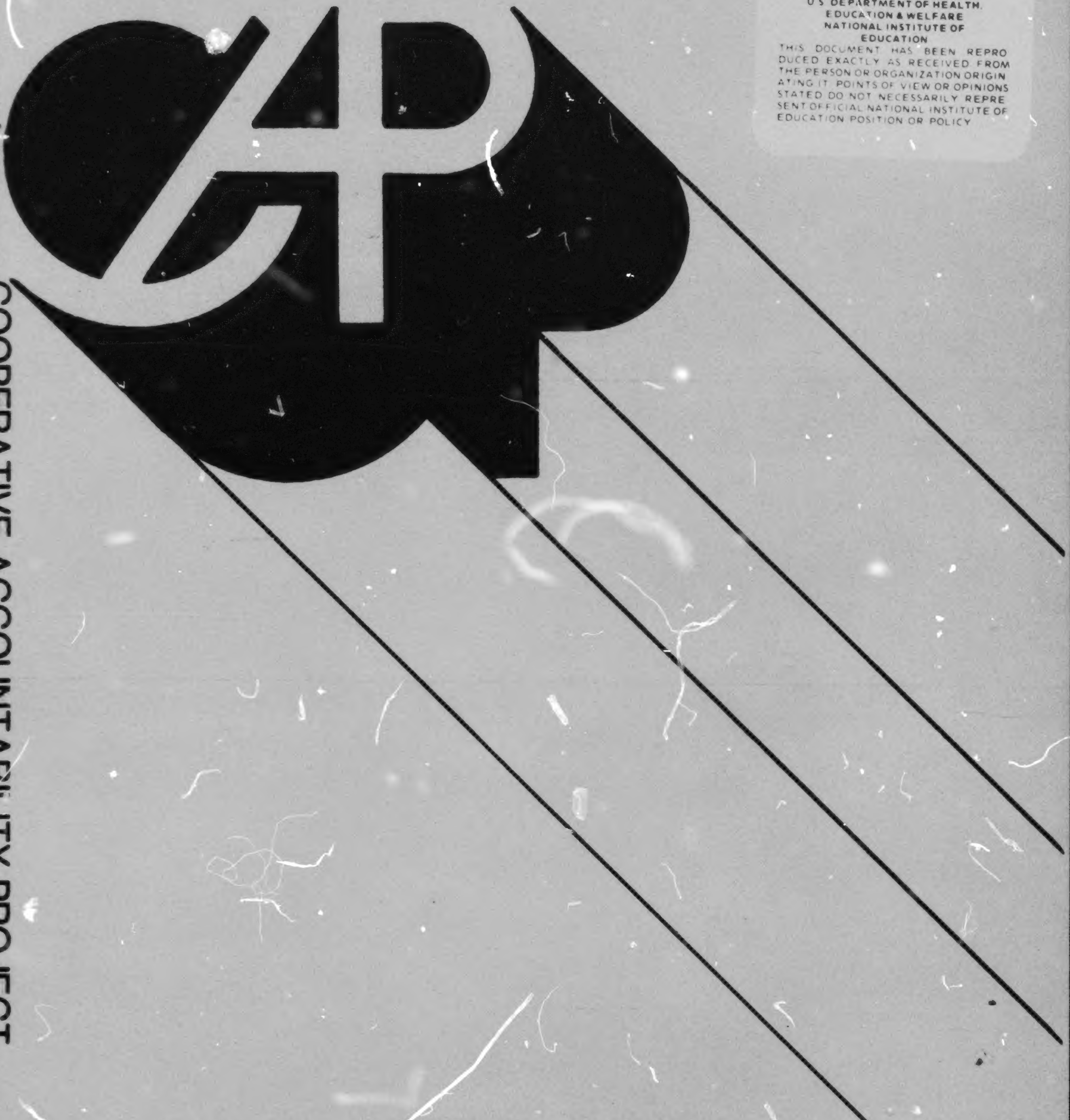

COOPERATIVE ACCOUNTABILITY PROJECT

EDUCATIONAL ACCOUNTABILITY IN FOUR STATES

(Colorado, Connecticut, Florida, and Michigan)

EA 008 252

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EDUCATIONAL ACCOUNTABILITY IN FOUR STATES
(Colorado, Connecticut, Florida, and Michigan)

Prepared By

Phyllis Hawthorne

SEAR

Division for Management and Planning Services

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

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FOREWORD

Expanding, nationwide interest and activity in the area of educational accountability naturally has brought a corresponding demand for information concerning the various aspects of existing accountability programs. More and more, departments of education, legislators, teachers, and citizens ask, "What are other states doing about accountability and how are they doing it?"

If time and finances permitted, each inquirer could embark upon a lengthy journey to find out, firsthand, what is happening in other states. Or they could seek out the hundreds of documents from which might be pieced together various state accountability stories. Happily, the authors of this monograph have simplified the task by providing a careful overview of accountability efforts in four representative states; thus a single publication may replace on-site investigations with at-home examination of the facts.

All existing state accountability legislation was studied for comprehensiveness and variety prior to the selection of Colorado, Connecticut, Florida, and Michigan for a sampling of accountability activity. The willingness of the states to cooperate in the development of the report also was an important consideration.

Careful review followed so that details of state legislation, implementation of the legislation, and major problems in the four states could be recounted accurately. A valuable list of references and copies of the actual legislative acts complete the monograph.

This addition to the list of Cooperative Accountability Project (CAP) publications should prove to be highly useful to educators and other individuals who want and need to know more about the varied approaches to educational accountability in states other than their own. The monograph provides both a means of comparison and an introduction to the hows, whys, and wherefores of accountability.

CAP is indebted to the authors and to the Wisconsin Department of Public Instruction for this very useful addition to the accountability literature.

Arthur R. Olson, Director
Cooperative Accountability Project

PREFACE

The Wisconsin Department of Public Instruction, a member of the Cooperative Accountability Project (an ESEA, Title V project administered by the Colorado Department of Education), has prepared this report describing the methods used by four states to achieve accountability through the assessment of students and the evaluation of educational programs. The CAP Project Operations Board determined that a report of the programs of several states with varied backgrounds and experiences in accountability would benefit other states in their search for ways to introduce accountability methods into educational planning. Colorado, Connecticut, Florida, and Michigan were selected for this purpose.

Educational accountability, the main purpose of which is to improve and increase student learning and achievement, is a concept that is approached by several means. Many states are engaged in establishing programs to obtain accountable results which include such methods as assessment of student achievement; evaluation of educational programs; program planning and budgeting; management-by-objectives; evaluation of professional employees; and/or performance-based school accreditation. Goals, objectives, and public reporting, along with attention to cost analyses, have emerged as essential elements to incorporate into these methods or processes for attaining accountability. Equally important is the reflection that accountability entails a continuous process of involvement of educators and community citizens to bring about the improvement of educational programs and student achievement.

The four states addressed in this report are involved in several or all of these methods, but the amount of information that exists in these areas is so extensive that it would be impractical to include in one report every means used by the four states to achieve their accountability aims. Since states nationwide are conducting programs to assess student achievement or to evaluate their educational programs to determine their impact upon student learning, our conclusion was to choose four states with legislation for increasing student learning and achievement through assessment and evaluation of educational programs and to describe the processes and policies that they have instituted to implement their laws.

The majority of the material for the report was gathered from the numerous articles and state education agency publications from each of the four states which are included in Wisconsin's State Educational Accountability Repository. A questionnaire and additional inquiries by telephone provided the rest of the information. A reference list of the publications used in the report is contained in Appendix A. A draft of the report was sent to key state agency personnel for revisions and updating.

The cooperation of state agency staffs in each of the four states is very much appreciated; their time, patience, and effort were essential for the completion of this report. Special thanks for their invaluable assistance are due to Dr. Arthur R. Olson, CAP Project Director, Mrs. Kathryn DePew, Dr. Leonard P. Landry, and Mrs. Betty-Jo Rule of the Colorado Department of Education; Dr. Crane Walker (deceased) and Ms. Judy L. Haynes of the Florida Department of Education; Dr. George Kinkade and Dr. Douglas Dopp of the Connecticut Department of Education; and Dr. Robert J. Huyser, Dr. Thomas H. Fisher, and Mrs. June Olsen of the Michigan Department of Education.

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SECTION I. INTRODUCTION

Many states now have legislative acts that authorize or mandate various processes for attaining accountability or for the development of a system of accountability. Some of these laws were imposed upon state education agencies by state legislatures; others were sought by state education agencies to authorize and fund programs they wished to develop and establish. By 1974, 30 states had enacted laws that involved various approaches to accountability. These include legislation for state and/or local assessment programs; evaluation of educational programs; development of educational goals and objectives; the institution of a program planning and budget system (PPBS), a management information system (MIS), or a management-by-objectives (MBO) system; evaluation of professional personnel; and accreditation of schools based partially, at least, upon pupil gain in achievement. All these processes are considered to be ways and means for obtaining accountable results in a state education system. Some states are putting these methods into practice with varying degrees of progress; others are just beginning, with the extent of their programs in action dependent upon both the interpretation of the laws by the state education agency and by the resources available to implement them.

The laws vary from broad statements of intent, such as Connecticut's law for the development of an evaluation and assessment procedure to measure educational programs, or Wisconsin's law, which calls for the development of an assessment program to measure pupil achievement, to those that are more comprehensive in scope. Such laws often include specific details concerning various steps in the assessment of students and also tie in the law with other demands; for example, the identification of and remedial assistance for low achieving students (Michigan), or cost analysis (Florida and Colorado).

Other states began without legislation (Minnesota, Missouri, and South Carolina, for example) but are similarly involved in applying the concept of accountability to the educational process through diverse means. The application of the accountability concept to education has come to public attention nationwide; indeed, more than nationwide, as indicated by informational requests to the Cooperative Accountability Project and SEAR which originate from the Canadian provices, the British Isles, the European continent, and Australia. With or without laws, both the establishment of educational goals and assessment have emerged as important beginnings in a process to achieve educational accountability. Most of the states conduct assessment programs or are planning to initiate them, including the outlying possessions of Guam, Puerto Rico, and the Virgin Islands. More than 30 states have adopted educational goals.

There can hardly be any degree of accountability or meaning to the term without goals and assessment, whether they apply to the goals and assessment of a state agency management operation or to a local school, its curriculum, teachers, and students.

Three of the states in this report (Connecticut, Florida, and Michigan) are operating state assessment programs; the fourth (Colorado) is concentrating upon local district accountability and assessment. All four of these states have adopted educational goals.

Purpose and Subject of Report

Educational Accountability in Four States (Colorado, Connecticut, Florida, and Michigan) was written to describe in detail the assessment and evaluation programs of the four states and the development and implementation of steps they initiated to progress toward the goal of accountability. It is hoped that the experiences and techniques developed by the four states will prove useful to other states with a similar intent in their planning and and operation of accountability and assessment programs. An evaluation of the effectiveness of the four states' programs and a critical analysis of their policies and strategies are not a part of this report. The purpose of the report is to represent to as current a degree as possible and as accurately as possible, the facts of what is being done by these states in the interpretation of their laws to advance the concept of accountability.

Since the main thrust of Wisconsin's role in the Cooperative Accountability Project is the examination of state laws that relate to some aspect of the accountability concept, states with such laws were selected from different parts of the coutry, as well as those with some years of experience in diverse programs of assessment, the evaluation of programs, or the implementation of accountability models. The legislation for Colorado and Florida are titled Accountability Acts; Michigan enacted legislation for a state assessment program that proposes to accomplish several things; and Connecticut's law is simply a broad mandate for the development of an assessment and evaluation procedure.

Format of Report

Following Section I, The Introduction, Section II of the report discusses the laws enacted by the four states that are the basis for their programs and gives an explanation of the background of the legislation and the content of the statutes.

Section III demonstrates how the laws are being put into action by each of the states and the changes in policy and strategy that took place since they were enacted. Several tables compare how the states are implementing their programs.

The Colorado Accountability Program is explained separately at the beginning of Section III because, unlike Connecticut, Florida, and Michigan, Colorado's program is not a state assessment program and cannot be compared to the assessment programs of the other three states.

In the course of writing about these activities, certain major issues emerged which are brought up in Section IV of the report for the reader to contemplate and consider.

Two appendixes complete the report. Appendix A is an annotated reference list of state agency reports and other materials that were used in the research for the report. Appendix B presents copies of the state laws that are covered in the report. Section II of the report begins with a discussion of these laws.

SECTION II. ACCOUNTABILITY AND ASSESSMENT LEGISLATION OF THE FOUR STATES

Introduction

Colorado, Connecticut, Florida, and Michigan have enacted several laws which reflect the public concern expressed in the late '60s and early '70s with the cost of education, what pupils are learning, and the demand for better accounting of local, state, and federal funds provided for educational programs. Colorado enacted an educational accountability statute in 1971 for state and local accountability programs that placed an emphasis upon local district control and meaningful public involvement. Connecticut's 1971 law called for the development of an assessment and evaluation procedure to measure the adequacy and efficiency of the educational programs in the public schools. Connecticut's state assessment is not mandated, but it is being conducted with local district participation on a sampling basis. Michigan and Florida established comprehensive laws for state assessment and evaluation programs in 1970 and 1971 respectively, with an emphasis more upon state supervision and control. The laws for Florida and Michigan were preceded by laws initiated by the departments of education in these states to authorize the development and implementation of an assessment and evaluation plan. The development of these statutes by the four states engaged state agency personnel, educators and their professional organizations, legislators, and citizens in considerable deliberation prior to passage.

Laws concerning other aspects of accountability were enacted by Colorado, Connecticut, and Florida that are concerned with comprehensive planning, program planning and budgeting systems, and/or the evaluation of professional personnel. These statutes can be found in *Legislation by the States: Accountability and Assessment in Education*, a regularly updated publication of the Cooperative Accountability Project. Although some mention is made of these laws, this report is confined principally to the implementation of laws that are related to accountability as approached through assessment and evaluation. The background and requirements of these laws are explained more fully in the text that follows.

Colorado Legislation

Background of the Educational Accountability Act of 1971

Goals and Performance Objectives

The move toward accountability in Colorado began before the passage of the Colorado Educational Accountability Act of 1971 (Title 22, Article 7, C.R.S. 1973). State educational goals had been defined and adopted as early as 1962 and were restated in 1971 (they now are being reviewed for revision). Performance objectives consistent with the state goals were developed for the Colorado Evaluation Project, which was conducted in the 1969-70 school year, and for the Title III needs assessment program first operated by the Colorado Department of Education's Assessment and Evaluation Unit during 1970-71. The Colorado Evaluation Project was introduced to field test Common Status Measures concurrently with a pilot program in assessment and evaluation that measured the performance of students in terms of specific objectives.

Title III needs assessment programs followed in subsequent years with school participation on a voluntary basis, the purpose of which was to assess performance in 12 subject areas to determine educational needs. Each subject area was stated in terms of performance objectives that specified what a pupil should be able to accomplish at the end of a given year in school. The difference between the stated objective and the performance measured became the educational need. The needs assessment program continued through 1973 in Colorado, but a full scale assessment was not funded for 1974.

By the time the Colorado Accountability Act was passed, the development of goals and performance objectives was not a new experience for Colorado educators and consultants in the state education agency. In addition, a substantial number of teachers had reviewed and judged the appropriateness of the objectives that had been prepared for the needs assessment program.

School Accreditation by Contract

Another significant step toward accountability was taken by Colorado with the adoption of an alternative state accreditation program called contract accreditation, first on a pilot basis in 1970 and then as a regular program in 1972. The move toward accreditation by contract parallels the intent and purposes of the Colorado Accountability Act for the establishment of local school district accountability programs. The plan is described in a Colorado Department of Education report entitled, *A School Improvement Process: Accreditation by Contract.*[1]

The contract program improves upon the standard state accreditation program by emphasizing the measurement of results rather than inputs. Contract accreditation in Colorado is a continuous improvement process, K-12, that encourages a local school district to develop its own standards based upon long-range plans and the needs of the pupils in the local districts. The process involves (1) community participation, (2) goals and objectives, (3) management-by-objectives, (4) formative-summative evaluation, and (5) reporting, all of which are components of an accountability system. Incorporated into the contract between the local board of education and the Colorado State Board of Education is a comprehensive, continuous, and long-range action plan in which the local district identifies specific staff and student objectives and develops activities to attain the objectives. Management-by-objectives is a principal component of the plan. Agreement on the action plan between the local school district and the Colorado State Board of Education, followed by implementation of the plan, constitutes accreditation.

The word "comprehensive" in the context of the plan denotes the inclusion of broad school-community involvement as well as a complete study of the interrelationships and interdependence of every educational need, goal, objective, program, practice, service, and resource.

"Continuous planning" refers to continuous evaluation by building a series of appraisal checkpoints into the plan to determine whether the desired aims of the program are being achieved by the means selected for accomplishment.

The term "long-range" signifies timely action for bringing about desirable change and preventing undesirable change. To be effective, the long-range plan should be at least five years in length.

The purpose of the contract accreditation program is expressed as follows in the Colorado Department of Education report:

- A way to individualize school-district accreditation by basing it on the particular needs of the students in each district

- A way to implement comprehensive, continuous, long-range planning by establishing specific staff responsibilities and districtwide procedures

- A way to make the best possible use of all available resources by better relating to (a) school and community; (b) needs, goals, and objectives; (c) programs, practices, and services; (d) program planning and budgeting; (e) inputs, processes, outputs; and (f) costs and benefits

- A way to determine results by establishing measurable objectives

- A way to take timely action by charting a long-range operational plan of who is to do what at what time[2]

The Colorado State Board of Education believes that both the standard accreditation program and the contract accreditation program should be accommodated in the state. Consequently, contract accreditation was adopted by the State Board as a regular program by 1972, and both standard and contract accreditation programs are sustained in Colorado at the present time. Contract accreditation has been called the precursor of accountability by Colorado Department of Education staff, and the goals of the contract accreditation program and the accountability program do, in fact, complement and strengthen both programs.

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[1] Rolland Powell and Leonard P. Landry, *A School Improvement Process: Accreditation by Contract* (Denver: Department of Education, June, 1971).
[2] Ibid., p.4.

By the beginning of the 1975-76 school year 20 of Colorado's 181 local school districts were partially under contract accreditation; 27 local school districts were fully under contract accreditation. By the end of the 1975-76 school year, 16 additional Colorado school districts will have made progress toward contract accreditation.

Interim Committee on Public Education and the Gibson Report

The Colorado Educational Accountability Act was drafted and submitted to the General Assembly in 1971 after a two-year study period by an Interim Committee on Public Education. The Committee members included ten legislators and five educators and school patrons who were concerned about the costs of education and the benefits received by the students from their educational experiences.

Of major significance to the development of the Colorado Accountability Act of 1971 was a report prepared by John S. Gibson, Professor at Tufts University and Director of the Lincoln Filene Center for Citizenship and Public Affairs. This report was written in cooperation with the Chairman of the Interim Committee on Public Education and was supported by a grant from the Colorado Department of Education under Section 503, ESEA Title V, 1965. The report, entitled *On Quality in Education*,[3] had a great deal of impact upon the drafting and passage of the Colorado Accountability Act of 1971; it recommended that the Colorado General Assembly devise legislation to create an educational accountability program in the state.

Central to the contents of the report are the ideas that goals for quality in education should be established; specific objectives developed; and those educational decisions of the previous year which had an adverse or positive effect on school processes and services and student achievement identified. A periodic review of goals and objectives should be made and a measurement of student achievement conducted. Consideration should be given to relating accountability to educational costs. The accountability program should be administered by the Colorado Department of Education through an advisory-type accountability committee; in addition, local district accountability committees should be appointed. All of these ideas were drafted into the language of the Colorado Educational Accountability Act of 1971.

Another impression gained from the report is the idea that all of the people who make decisions about the education of students can advance the concept of accountability. All are responsible for improving the quality of education and for supplying the school services and processes needed so that the students achieve the stated goals and objectives. The governor and the legislators of a state have to provide the resources and backing needed by the department of education to enhance the quality of education. The department of education has to provide the leadership and services needed to affect or improve the quality of school services and processes. Superintendents, principals, and teachers must provide specific services and processes to advance student achievement. The decisions of all educational organizations, local boards of education, and school committees in a state can affect the quality of education.

The Colorado Accountability Act alludes to these ideas when it says that a purpose of the accountability program is to define and measure quality in education. Reporting to students, parents, boards of education, educators, and the general public is suggested as an approach to be explored. The State Advisory Committee membership is to include legislators and citizens as well as educators; local accountability committee membership is to include local citizens as well as local educators. The role of the Colorado Department of Education in assisting local school districts to strengthen their educational programs is to be clarified. Local school boards are to help their school patrons determine the relative value of their school programs compared to their cost. In other words, the attainment of accountability is reached by the combined efforts of all segments of educational decision makers. The interrelationships and interdependence of these segments are expressed more precisely in the Rules and Regulations which were promulgated to carry out the directives of the Colorado Accountability Act. (A copy of the Rules and Regulations is in Appendix B, and they are discussed in Section III.)

PPBES and Comprehensive Planning

Mention should be made of two other laws enacted in 1971 because of their relationship to the Colorado Accountability Act enacted the same year. These laws are the PPBES Act (Program Planning, Budgeting, and Evaluation System) and the Comprehensive Educational Planning Act. The Comprehensive Educational Planning Act (Title 22, Article 6, S. 101-113, C.R.S. 1971) was enacted to provide financial support for the development of school improvement plans under requirements that are similar to those needed for local school district contract accreditation. The purpose of the PPBES Act was the development of a PPBES budget format

[3] John S. Gibson, *On Quality in Education* (Denver: Department of Education, April, 1971).

for use in the public schools that would present educational programs in terms of pupil achievement and relate the programs to cost.

The Comprehensive Educational Planning Act no longer is funded, and the PPBES Act was repealed in 1973 because it proved to be unworkable in practice. A less restrictive law entitled the Financial Policies and Procedures Act (Title 22, Article 44, Part 2, C.R.S. 1973) succeeded it in 1973 which is more compatible with the provisions of the 1971 Accountability Act. As a result of the 1973 law, a Financial Policies and Procedures Handbook has been prepared for use by the local school districts. All the districts are required to prepare uniform budgets according to the program-oriented budget format contained in the Handbook. The purpose of the budget format is to relate anticipated costs and actual costs to designated programs.

Principal Components of the 1971 Educational Accountability Act

Purpose

The purpose of the Educational Accountability Act is presented as instituting an accountability program "to define and measure quality in education, and thus to help the public schools of Colorado to achieve such quality and to expand the life opportunities and options of the students, and to provide to local school boards assistance in helping their school patrons to determine the relative value of their school program as compared to its cost." The accountability program is "to measure objectively the adequacy and efficiency of the educational programs offered by the public schools."

State and Local District Accountability Programs

The law requires that a state accountability program and local district accountability programs be developed. The legislation, though comprehensive, is not restrictive or dictatorial. Local districts have control over their own goals, objectives, programs, and evaluation approaches. A state assessment is not mandated in the Accountability Act.

The law does assign responsibilities that enable the school districts to build programs for attaining accountability commensurate with the general guidelines stated in the law. These guidelines include the development of broad goals and performance objectives at the state and local levels and the development of a system for evaluating the achievement and performance of the students at the local level. Several approaches are suggested for examination in developing an evaluation mechanism:

- A means for determining whether decisions affecting the educational process are advancing or impeding student achievement
- Development of appropriate testing procedures to provide relevant comparative data at least in the fields of reading, language skills, and mathematical skills
- Determination of the role of the Department of Education in assisting school districts to strengthen their educational programs
- Reporting to students, parents, boards of education, educators, and the general public on the performance of the public schools and providing data for the appraisal of such performance
- Provision of information to help school districts increase their efficiency in using available financial resources

State Board of Education Duties

State Board of Education duties encompass the development of a state accountability program which will:

- Describe and provide for implementation of a procedure for the continuous examination and improvement of the goals for education in the state
- Identify performance objectives that will lead to the achievement of the stated goals.

- Adopt a procedure for determining the extent to which local school districts accomplish their performance objectives. Develop evaluation instruments to provide the evaluation required, but not use standardized tests as the sole means for providing the evaluation

- Assist the local boards of education to prepare district goals and objectives and the procedures for measuring school district performance in reaching them

- Recommend a procedure and timetable for the establishment of the local accountability programs

- Adopt rules and regulations to implement the Act

Advisory Committees

A state advisory committee is required by law to assist the Colorado State Board of Education in identifying the procedures needed to accomplish the requirements specified in the Act. Local advisory committees are to be appointed to make recommendations to the local school boards concerning the local accountability programs, although the local school boards maintain final authority. Citizen involvement is emphasized in the membership both of the state and the local advisory committees.

Reports

The law directs the local school boards to report to the residents of the school districts and to the Colorado State Board of Education by December 31 annually on the extent of the achievement of their stated goals and objectives and on the evaluation of educational decisions made during the previous year that affected school services and processes.* The Colorado State Board of Education is to report by March 1 on a yearly basis to the General Assembly on the progress of the state and local school district accountability programs and recommend any legislation it thinks is necessary to improve the educational quality in the state.

Appropriation

The General Assembly appropriated $40,000 to the Colorado Department of Education for the fiscal year beginning July 1, 1971, to carry out the implementation of the Act. Funding for the implementation of the Act since the fiscal year 1971-72 has been designated from within the Department of Education's general budget.

Colorado's costs for the fiscal year 1974-75 were the costs of the District Planning and Accountability Services Unit of the Colorado Department of Education for assisting the local districts to meet the accountability requirements under the law. The staff is composed of one supervisor, four consultants, and one secretary. The 1974-75 costs (excluding full-time equivalent salaries) amounted to $13,500 for printing, publications, postage, photocopying, telephone, and travel. Eighty-five per cent of the costs were funded by the state.

Connecticut Legislation

In 1971 the Connecticut General Assembly enacted several laws for the evaluation of programs the passage of which can be attributed to the concerns of the public, legislators, and educators regarding education in the state at that time. Cooperation developed between the legislators and educators as their own reactions to these concerns became known to one another. The Connecticut State Board of Education and the Connecticut General Assembly shared an interest in advancing the concept of accountability and for improving the quality of education throughout the state. An additional incentive was a mandate from the Governor's Office of Finance and Control that state agencies institute a program planning and budgeting system which the Connecticut Department of Education decided to implement as soon as possible.

Title 10, S. 4, Conn. Gen. Stat.

Acts were passed in 1971 in Connecticut which called for a periodic evaluation of specific programs; namely, evaluation of vocational and occupational education programs, programs for the disadvantaged, special education programs, federally funded programs, and experimental programs. Title 10, S. 4, *Conn. Gen. Stat.*

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* The revised 1975 Rules and Regulations altered these dates. Local school boards are to report to the residents of their districts by at least December 31 of each year and to the State Board of Education by at least August 15 annually.

(Public Act No. 665) is the law which is primarily related to the Connecticut 1971-72 reading assessment. Before the legislation was enacted, the Connecticut State Board of Education already had approved a Department of Education report and recommendations for a statewide needs assessment and a statement of goals upon which the assessment should be based. The Board approved of the recommendations but determined that the assessment should be a comprehensive study rather than merely meet the requirements of ESEA Title III.

Title 10, S. 4 (Public Act No. 665) amended an earlier 1969 statute which had requested the Connecticut State Board of Education to submit to the Governor and the Connecticut General Assembly "an account of the condition of the public schools and of the amount and quality of instruction therein and such other information as will apprise the General Assembly of the true condition, progress and needs of public education." The 1971 Act essentially retained the above statement but was more definitive in that it now asked the Connecticut State Board of Education to "develop an evaluation and assessment procedure to measure objectively the adequacy and efficiency of the educational programs offered by the public schools. . ." The Connecticut State Board also was directed to recommend policies and programs designed to improve education in the state.

The law is in keeping with the philosophy of Connecticut's State Board of Education, Commissioner, and staff of the Department of Education. Although it does not mandate a state assessment program, the Connecticut Department of Education is operating a continuing, statewide, objectives-based assessment program that entails the development of state educational goals and objectives. The 1971-72 reading assessment was announced publicly by the Connecticut State Board in October, 1971; it was the first cycle of a series of assessments planned in other subject areas. Science was assessed during the 1974-75 school year. A second reading assessment was conducted in the fall of 1975.

Florida Legislation

Background of the Educational Accountability Act of 1971

Florida's Educational Accountability Act of 1971 was initiated by the Florida Department of Education following recommendations from the Commissioner of Education for the passage of previous laws so that he could carry out his responsibilities for public education in the state. An earlier law enacted in 1968, Section 229.551, *Florida Statutes*, had instructed the Commissioner "to expand. . . the capability of the state department of education for planning the state's strategy for effecting constructive educational change, and providing. . services necessary to achieve greater quality in education." The Commissioner was further instructed to use "all appropriate management tools, techniques, and practices which will cause the state's educational programs to be more effective and which will provide the greatest economies in the management and operation of the state's system of education."

In order to carry out the instructions of Section 229.551, several pieces of legislation were recommended by the Commissioner in subsequent years. First, the Commissioner defined the major role of the state in education in the form of nine statements ultimately adopted by the Florida State Board of Education in August, 1969. These statements included the establishment of state educational objectives in priority order, sound financial support, minimum standards for achievement and quality controls, assistance to localities for evaluating results, an information system, and efficient use of funds, among others.

The Commissioner recommended legislation establishing an educational research and development program in the Florida Department of Education for developing new techniques to improve the quality of education. The Florida State Legislature approved the Educational Research and Development Program in 1969 and appropriated a sum annually for sponsoring the program beginning with the 1970-71 fiscal year. The Research and Development Program contributed to Florida's accountability efforts by developing preliminary objectives and test items for assessment and by piloting alternative educational practices in the districts that are interlocked with several aspects of the accountability program.

The Commissioner also recommended to the Florida Legislature that statutory authorization be afforded him to develop a plan for evaluating the effectiveness of educational programs. In response to his recommendation the Florida Legislature enacted Title 15, F.S.A., S. 230.23 in 1970. This law authorized the Commissioner to develop evaluation procedures "designed to assess objectively the educational programs offered by the public schools. . . and [develop] such methods as are necessary to assess the progress of students at various grade levels." The plan was to provide each school district with relevant comparative data and, to the extent possible, be compatible with the National Assessment of Educational Progress. The Commissioner's plan was delivered to the Florida State Legislature by March, 1971, under the title *Plan for Educational Assessment in Florida*. The 1971 State Legislature adopted the Commissioner's plan and enacted the Educational Accountability Act (Title 15, *Florida Statutes*, S. 229.57) to carry out the procedures recommended in the Commissioner's plan.

In 1974 the Florida Accountability Act of 1971 was revised. The major provisions of the revised Act are described in the next section, as well as the differences between the original law and the revised law.

Major Provisions of Florida's Revised Educational Accountability Act

This law is a comprehensive accountability statute based upon cost efficiency and behavioral objectives. The Commissioner of Education is directed to implement a program of educational accountability for the operation and management of the public schools which shall include the following:

- The establishment of major or ultimate, basic, specific, uniform, statewide educational objectives for each grade level and subject area, including, but not limited to, reading, writing, and mathematics in the public schools
- A uniform, statewide system of assessment based in part on criterion-referenced tests and in part on norm-referenced tests to determine periodically pupil status, pupil progress, and the degree of achievement of established educational objectives
- Procedures for comparing statewide results to national indicators of student performance
- An annual public report of the assessment results by grade and subject area for each school district and the state, with an analysis and recommendations concerning the costs and differential effectiveness of instructional programs

The school boards of the local districts are to make annual reports of the assessment results by grade and subject area for each school in the district and file a copy with the Commissioner of Education.

The amendments in the revised law which changed the 1971 law are summarized as follows:

- The 1971 Act specified the subject areas to be assessed without indicating grades: reading in 1971-72; reading, mathematics, and writing in 1972-73; and reading, writing, mathematics, and other subject areas in 1973-74.
- The 1974 Act stipulated that *all* students in grades 3 and 6 be assessed in the subject areas of reading, writing, and mathematics in 1974-75, and *all* students in grades 3 *through* 6 be tested by 1976.
- No other subject area is to be tested until the assessment of reading, writing, and mathematics has been implemented in grades 3 through 6.
- Statewide results are to be compared to national indicators of student performance.
- An interpretation of the results for each school shall be reported in the annual report of school progress. This report is to be prepared by each school for the parents of all children in the school.

One other major change occurred in the Accountability Act because of legislation enacted in 1975. Both the original Accountability Act of 1971 and the 1974 revised Accountability Act directed the Commissioner of Education to develop accreditation standards based upon the attainment of established educational objectives. The 1975 Florida State Legislature discontinued state accreditation which, in effect, abolished this directive.

Michigan Legislation

Public Act No. 307, 1969 (S. 14 of State Fiscal Budget)

Michigan's assessment program was legislated by two laws. Section 14 of the Michigan Department of Education's appropriation budget (Public Act No. 307), enacted in August of 1969, was initiated by the Michigan State Board of Education following a proposal by staff members in the Department of Education for a statewide educational assessment program. The lack of reliable data concerning the performance level of students, schools, and districts, and concerning the distribution and progress of education in the state gave impetus to the proposal. It received the support of the State Superintendent of Public Instruction, the Governor, and the Michigan Legislature.

The bill gave the Michigan Department of Education broad authorization to develop a statewide program for conducting "a periodic and comprehensive assessment of educational progress" that would measure educational outcomes objectively and to test annually pupil achievement in the basic skills at one or more grade levels. Funding in the amount of $250,000 was provided in the 1969-70 state appropriation budget. The first assessment took place in January, 1970.

Public Act No. 38, 1970 (Vol. 18, Mich. C.L.A. S. 388, 1081-1086)

Background

Public Act No. 38 was introduced by the Governor, and it mandated a more comprehensive program that redesigned aspects of the assessment for 1970-71 and future assessments. Although the Act was not initiated by the Michigan Department of Education, direct input was supplied by Department staff to the Governor's staff, and staff members testified at several legislative hearings. There were a number of reasons that led to the passage of this legislation.

Initially, the Michigan Department of Education had decided upon a policy of not publicly identifying individual districts in reporting the results of the 1969-70 assessment. Instead, each district received the scores for its own schools confidentially, but the district was encouraged to release the information publicly. After the first results were printed and released, there was strong gubernatorial and legislative pressure upon the Michigan Department of Education to identify the districts and to supply comparative data on all of the schools in the state.

A second factor was the amendment of the 1968 State School Aid Act. This law established a four-year program for assisting schools having a concentration of economically and educationally deprived students. The 1970-71 legislative session provided additional funds for this purpose totaling $17.5 million ($22 million in the last year of the program), and it was decided to tie some of these funds to the school district results of the 1969-70 assessment. Specifically, the results for grade 4 in the 1969-70 assessment were used to determine the ranking of each school on two criteria: (1) a high percentage of students with low socioeconomic status, and (2) a high percentage of students with a low achievement in basic skills. This legislation necessitated the public disclosure of all the schools' standings in the assessment program. Public disclosure of local assessment results therefore became a mandatory policy for subsequent reports of the 1969-70 assessment as well as for future assessments.

Individual pupil results were not reported in the 1969-70 assessment. Short versions of conventional basic skills tests were used in the interests of containing costs and minimizing testing time. Funds were not provided for test construction. The short tests assembled for the program were designed to produce results that would be reliable and meaningful for school- and district-size groups, and these were reported back to the districts. Some local district educators felt that individual pupil results should be furnished to local school officials so that they could redesign their programs for specific low achievers.

The Governor was particularly interested in identifying individual pupils for the local districts in order to avail them of remedial assistance funds. He wished to establish a firm, statutory base for a more comprehensive assessment program that reflected public disclosure of results and the wishes of his constituents. He introduced Public Act No. 38, enacted in 1970.

Major Provisions of Public Act No. 38, 1970

Purpose

The purpose of the state assessment is to provide the information needed to equalize educational opportunities for the students; to improve and introduce educational programs to raise their level of achievement and improve the quality of education; and to identify the students in need of remedial assistance.

Department of Education Directives

The Michigan Department of Education is to be responsible for developing and conducting the state assessment program and may use the services of appropriate testing organizations or testing specialists. The Department is expected to carry out the following directives in the law:

- The establishment of a statewide annual assessment of pupil progress in the achievement of basic skills in reading, mathematics, language arts, and/or other subject areas covering all students annually at two grade levels in the public schools. The current testing of grades 4 and 7 should be expanded.
- Development of pupil achievement goals in the basic skills
- Identification of the pupils with the greatest educational need in these skills
- Provision to the school systems of strong incentives to introduce educational programs for improving education of the students in basic skills and model programs to raise the level of achievement
- Development of a system of educational self-renewal that will continuously evaluate programs in the schools, thereby helping each school discover and introduce program changes to improve the quality of education
- The collection of other relevant information essential to the assessment program

Reports

The Michigan Department of Education is to provide the information needed for state-level decisions about the allocation of state funds and professional services to enable students to achieve competence in the basic skills and to equalize educational opportunity. Information from the program also is to be provided as soon as possible to each school to assist in its efforts to improve the achievement of its students in the basic skills. Lastly, the public is to be informed periodically concerning the progress of the state system of education.

Remedial Assistance

Based upon information from the assessment program, the Michigan Department of Education is to provide remedial assistance programs to the school districts, as funding is appropriated by the State Aid Act, to raise competency in the basic skills of those students who have been identified as having extraordinary need for assistance.

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Section III of this report discusses the methods being used and the progress reported by each state in the implementation of the statutes described in Section II.

SECTION III. IMPLEMENTATION OF ACCOUNTABILITY LEGISLATION BY THE FOUR STATES

In describing the implementation of the accountability legislation by the four states included in this report, only the methods used by Connecticut, Florida, and Michigan for developing and conducting their state assessment programs can be compared. As noted in the Introduction, these three states operate state assessment programs; Colorado does not. Colorado runs a distinctive program of its own to attain accountability, beginning at the local school district level. The uniqueness of the program prevents comparisons between Colorado and the other three states; therefore, Colorado's accountability program is discussed separately from the other states at the beginning of Section III. The rest of Section III is devoted to a comparison of the state assessment programs conducted in Connecticut, Florida, and Michigan.

Colorado Accountability

State Accountability Advisory Committee

As required by the Colorado Accountability Act of 1971, a 17-member State Accountability Advisory Committee was appointed to assist the State Board of Education in performing the Board's duties mandated in the Act. The State Accountability Advisory Committee is performing a decisive role in helping the Colorado State Board of Education implement the law by coordinating the accountability efforts of the local school districts in the state. In addition, the State Advisory Committee relays the idea, concerns, and points of view of the local educators and citizens back to the state education agency.

The State Accountability Advisory Committee has taken a strong position on the philosophy that procedures for attaining accountability must not be imposed upon the local districts from the state level; they should move from the local level up to the state level, with the local districts retaining as much control over the operation of their accountability programs as is consistent with the law. This position is endorsed by the Commissioner of Education, State Board of Education, and the Colorado Department of Education.

To carry out the implementation of the Colorado Accountability Act under this policy, the State Advisory Committee has cooperated with the Colorado Department of Education staff since 1971 in assisting the local districts to understand the accountability process and to proceed through five steps for developing local accountability programs identified in a set of Rules and Regulations for implementing the law. The Accountability Act mandated that the State Board of Education adopt rules and regulations to carry out the directives in the Act; the State Advisory Committee was instrumental in executing this mandate.

Rules and Regulations

Two sets of Rules and Regulations have been adopted by the Colorado State Board of Education. The more recent set is a revision of the first Rules and Regulations. Some time limits structured into the first set of Rules and Regulations were tied in with dates required by the 1971 PPBES Act and the 1971 Comprehensive Educational Planning Act. Since both of these laws no longer were operating by 1973, the State Accountability Advisory Committee initiated a study of the Rules and Regulations for the purpose of revising them. A revision requires public hearings, adoption by the Colorado State Board of Education, and approval by the Attorney General of Colorado to make the Rules legal. Recommended changes were made based upon suggestions from local school districts, local committees, State Advisory Committee members, and the Colorado Department of Education staff. The revised set of Rules was adopted by the State Board of Education in July, 1975 (see Appendix B for copy) , and was approved by the Attorney General of Colorado the following September.

The changes in the 1975 Rules and Regulations clarified definitions; eliminated dates that no longer were relevant; established a more realistic reporting date for the local school districts' annual reports to be submitted to the State Board of Education; and defined more clearly the roles and responsibilities of the participants in their accountability program.

Although the Rules and Regulations serve as procedural devices for administering the law, they do reflect the interpretation of the law by the State Board of Education, the State Advisory Committee, and the Colorado

Department of Education. The Rules clearly emphasize local autonomy and the desirability of building accountability into Colorado's state education system from the local school district level up to the state level. The interdependence and interrelationships among the local school district's board, superintendent, school administrators, teachers, local committees, and the community are defined. The roles of the State Board of Education, the State Advisory Committee, and the Colorado Department of Education are precisely drawn. The language of the Rules and Regulations is punctuated throughout with the determination of the state's educators to introduce and gain acceptance of accountability at the local level. The special emphasis the Rules and Regulations place upon local accountability programs and local autonomy creates the impression that there is less emphasis at this time on the state accountability program. The language expressed in the Rules veers away from any semblance of control over the local districts, and the State Board of Education emerges as a guiding body which establishes policies and suggests procedures to assist the local districts in developing and implementing their local accountability programs. In the language of the Accountability Act, the duties of the State Board are more definitive. The local boards of education are given the authority by the Rules to establish their own timetables for the development and operation of local accountability programs; in the law, the State Board of Education was to have recommended a timetable for the establishment of the programs. One questions whether the Rules express the full intent of the Colorado Accountability Act as enacted by the Colorado General Assembly, but they do express how the Act has been interpreted by the state's educators to arrive at the same end result, and the educators feel that state educational accountability cannot be fulfilled without the initial acceptance of educational accountability by the local districts. The Rules and Regulations document is important because approval by the Attorney General of Colorado connotes the necessity for compliance with the Rules; therefore, they play a vital part in the actual implementation of the law.

Five sequential phases are stated in the Rules and Regulations as necessary steps through which local school districts must progress in order to develop local accountability programs:*

1. Develop, analyze, redefine, and improve a statement of goals for the district
2. Identify and prepare statements of student outcome objectives and staff objectives for the district
3. Improve, modify, or develop programs to achieve the student outcome objectives and staff objectives of the district
4. Determine, evaluate, and report the strengths, weaknesses, accomplishments, and costs of the established programs in terms of the goals, student outcome objectives, and staff objectives of the district
5. Redefine and modify, based on evidence from the evaluation procedure, any of the parts or characteristics of a program through planning, budgeting, and decision making

The revised Rules and Regulations require all local school boards to account for the expenditures of money and the commitment of other resources in terms of the results achieved by their accountability programs. For this accounting, the districts are to follow the format contained in a handbook which was developed according to directives in the 1973 Financial Policies and Procedures Act.

Dissemination of Information

Following the passage of the Colorado Accountability Act and the adoption of the first set of Rules and Regulations, an explanation of the Act and a draft of the first Rules and Regulations were sent to district superintendents throughout the state. A brochure was prepared for public explanation of the Act, and press releases were sent out. Panel discussion groups took place between the Colorado Department of Education staff and local district school groups and citizens. Accountability teams were trained by Department of Education staff to assist the districts in numerous statewide regional workshops and training sessions. Consultative services still are provided to the local districts, principally by Department of Education staff, to help the districts prepare student and staff objectives and to aid progress through other aspects of the local district accountability process.

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* *Rules, Educational Accountability Act of 1971* (Denver: State Department of Education, July, 1975), p.5.

Local District Reporting

A detailed report form is sent to the local school districts each year to acquire information about their activities as the districts progress in their accountability programs. Local school district reports are used by the Colorado State Board of Education as a basis for the Board's March 1 annual report to the Colorado General Assembly. Four annual State Board of Education reports have been completed since the enactment of the accountability law.

The local school districts also must report the progress of their accountability programs to their school patrons. Many of the districts are making this attempt, but uncertainty about collecting the information needed, the best way to report it, and what should be expected has created problems for the districts. Guidelines now are being devised by Colorado Department of Education staff to help the districts in this task.

Colorado Education Goals

Colorado's Educational Accountability Act of 1971 mandated the development of a continuous goal review procedure to improve the state goals for education and to encourage the establishment of local district goals. The state goals had been restated in 1971 and were derived from an earlier set of goals adopted by the State Board of Education in 1962. The impact of the Gibson report* was a factor in the restatement of these goals, which was undertaken largely through the efforts of the Colorado Department of Education staff. Citizens' statements gathered during meetings in past years and research on how and why students learn were investigated. The Colorado Title III needs assessments were referenced to the 1971 goals. Colorado now is in the process of revising the state goals through a new review procedure adopted by the State Board of Education in 1972. The initiation of this procedure in January of 1974 constitutes an important step in the formulation of the state accountability program.

Goal Review Procedure

The goal review procedure was developed under the initiative of the State Advisory Committee in cooperation with the Colorado Department of Education staff. The plan involves a much wider representation of the state's citizens in the goal development process than was the case in 1971, and the goals are expected to be finalized in 1976. The new review process is based upon the position, upheld by the State Board of Education, the State Advisory Committee, and the Colorado Department of Education, that final statewide goals should relfect and support the desires expressed in the local school district goals.

The first task of the Department of Education staff and the State Advisory Committee was to assist the local districts in completing the preparation of local district goals in accordance with the law. To accomplish this step, the Department of Education staff spent considerable time in regional workshops disseminating to the districts information about the development of goals. As a result of the workshops and consulting services, local district goals, either new or revised, have been developed by approximately 98 per cent of the 181 school districts in Colorado. Most of these goals are broad statements of educational purpose. Others are broad guidelines for curriculum areas, and some involve minimum programs.

Public participation in the local district accountability programs is encouraged in the law, and many of the districts engaged in a number of activities to involve their local communities in the goal development process. Open meetings were held, and discussions were conducted with parent groups, minorities, administrative groups, teacher groups, and the school boards. Community groups such as business and labor organizations also took part.

Analysis of Local District Goals

When approximately 68 per cent of the local school districts had filed their district goals with the State Board of Education, a summary and analysis of the goals was completed in May, 1974, as a dissertation by a doctoral candidate at the University of Colorado. From this analysis of the local district goals, and with the advice of the State Advisory Committee, the Colorado Department of Education's Division for Evaluation and Planning proposed an initial set of nine state learner outcome goals.

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* Dr. John S. Gibson of Tufts University, Boston, was hired as a consultant to the Colorado State Legislative's Committee on Public Education. He recommended restatement of Colorado's educational goals.

Discussion Groups

The nine proposed goals are being circulated to representative groups of citizens for their reactions in a series of discussion conferences throughout Colorado. Assistance in appointing the membership of the representative discussion groups was sought from school superintendents and the local accountability advisory committees.

Rotating Subcommittee

A rotating subcommittee will assist the State Advisory Committee with the discussion conferences and in analyzing the comments and recommendations of the discussion groups. The subcommittee will be composed of State Accountability Advisory Committee members, members of the local accountability committees and local school boards, and local district citizens, parents, and students. The subcommittee will be responsible for preparing a second set of goals that will reflect the comments of the discussion groups. The second set will be submitted to selected persons in the discussion groups to verify the subcommittee's interpretation of their statements.

Final State Goals

The State Advisory Committee plans to have a final set of state goals ready for adoption by the State Board of Education in 1976. The State Advisory Committee recommends that the final state goals serve as a guide for the state and its agencies in the preparation and implementation of educational plans and programs that supplement local district efforts. The Committee suggests that a review of the state goals take place every two years.

Development of Performance Objectives

The Colorado Accountability Act also mandates that performance objectives be identified which will lead directly to the achievement of the stated goals. Local school districts must determine the extent to which they accomplish their performance objectives. As with the new state goals, performance objectives are being developed in the local school districts first, and when at least two-thirds of the districts have developed their objectives, they will be analyzed and state performance objectives related to the local district objectives will be developed from this analysis.

Local District Performance Objectives

The local school districts received assistance in the writing of performance objectives from field representatives and project coordinators of the Colorado Department of Education in a substantial number of meetings and workshops located around the state and through individual visits. Most of the local districts implemented a plan for developing objectives following the workshops, and some were able to write their objectives. Others sought further consultative assistance directly from the Colorado Department of Education or the Board of Cooperative Services; a few districts used independent consultants. However, consultants from the Colorado Department of Education are the primary source the local districts use for assistance in the development of local performance objectives.

In-service training in writing objectives is provided by many districts to local accountability committee members, teachers, administrators, specialists, para-professionals, and support personnel. Although a few citizens have taken part in developing objectives in some of the districts, teachers and administrators are the predominant source for writing the objectives. The student outcome objectives that have been written are concentrated mainly in the subject areas of mathematics, reading, and language arts.

Progress by the local districts through the first two sequential steps of goals and performance objectives expressed in the Rules and Regulations for the development of local accountability programs is under way. The *Fourth Annual Report on the Educational Accountability Act of 1971*[8] contains information about the progress of the districts in the development of local accountability programs and in areas where the districts need further assistance.

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[8] *Fourth Annual Report on the Educational Accountability Act of 1971* (Denver: State Department of Education, 1975)

Results Reported by Local Districts in the Fourth Annual Report

There are 181 local school districts in Colorado. Of this number, 168 districts reported in time to be included in the Fourth Annual Report published by the State Board of Education early in 1975. This report reveals what was accomplished by the local school districts in the 1973-74 academic year. Eight local district reports were received too late for inclusion in the Annual Report; five other local districts did not comply with the law's directive to complete the reports.

A total of 166 of the 168 local school districts reported that they had functioning local accountability advisory committees with a higher percentage of membership composed of parents, students, and citizens than of professional educators. Ethnic groups and economic groups were represented on a majority of the committees. The law stresses public involvement in the membership of the local advisory committees.

Local boards of education of 89 per cent (150) of the reporting districts received recommendations from their local advisory committees which suggested steps for upgrading the quality of student learning. These recommendations reflected the combined thinking of the district and community, and they covered areas of instruction, curriculum, evaluation, staff, students, and facilities.

Two major activities of the local school districts during the 1973-74 school year were (1) the development of local district student outcome objectives to support the purposes of the goals, and (2) the review and revision of curriculum and instruction in terms of the purposes and intent of the goals and objectives. Student outcome objectives generally were established first by the local school districts, to be followed by the development of staff objectives.

Based upon information received from 168 districts reporting for the *Fourth Annual Report*, 69 districts had begun work on the development of student *and* staff objectives. Forty-three districts said that they were working on the development of *either* student *or* staff objectives. Thirty-eight districts were planning to develop student and staff objectives during 1974-75. Eighteen districts did not respond to the question, and presumably no work or planning is being done in these districts on the development of objectives.

The local districts are beginning to use their goals and objectives in the short-term and long-range planning of educational programs. As a result of establishing goals and objectives, constructive changes in curriculum were made by the local school districts in which instructional programs were placed in a more logical order, curriculum guides were developed, specific courses were added, and staff positions to support and maintain the changes were established. The basic purpose of the changes in curriculum was to coordinate and articulate the educational programs from kindergarten through the twelfth grade.

Additional constructive changes were made by the local school districts in instruction which included the review and updating of existing programs; the addition of new courses; the stressing of individualized approaches to learning; and the planning of alternative educational programs, work study programs, and innovative learning experiences. The basic purpose of the instructional changes was to broaden the experiences and opportunities of the students and to plan programs to interest the students and fulfill their needs.

There have been other results. Some local school districts are including in their annual reports information concerning both the successful and unsuccessful attempts made in establishing their programs so that other districts can benefit from these experiences.

Staff organization and responsibilities are being designed in some local districts with a view toward a management-by-objectives approach. Three local school districts have adopted and are implementing a management-by-objectives system.

As a result of citizen membership on the local advisory committees, more productive community and professional relationships have been developed. There is more community understanding of the local board of education's decisions and programs, and the local boards receive the benefits of the points of view expressed by community members. An estimated one-half of the local school board of education members elected in the spring of 1973 were former members of the local accountability advisory committees.

Another important result is the increase in communication and services that is taking place between the state education agency and the local districts.

Further Assistance Needed by the Local School Districts

Very few of the local districts have worked through the total processes of developing and measuring goals and objectives at the school building level; evaluating their programs in terms of the results; and comparing the cost of their programs to their relative value. One of the most difficult steps for the local districts is interfacing their district student outcome objectives with existing educational programs at the school building level. Some districts are concentrating on measuring objectives in one or two programs such as language arts and mathematics. Others plan to implement both student and staff objectives in all their programs. Some districts are developing specific objectives at the subject matter level and the classroom level.

The local districts use a number of measures to gather information about the strengths and weaknesses of their programs, but standardized tests, teachermade tests, and observation still are the methods most frequently used. Some criterion-referenced testing is being tried by the districts. Of the 168 local school districts who reported on this area of questioning, 90 per cent (151) used standardized tests during 1973-74; 30 per cent (51) used commercial criterion-referenced tests; and 33 per cent (37) used district-developed criterion-referenced tests. Criterion-referenced measurement and in-service programs to familiarize the staff with evaluative skills and techniques were stated by the local districts to be foremost needs.

Concerning cost procedures, the *Fourth Annual Report* states that 69 districts were in the preliminary stages of developing methods for determining the costs of programs, but few were able to give detailed analyses of the cost effectiveness of their programs.

A substantial amount of work and dedication lies ahead for the Colorado Department of Education staff and the State Accountability Advisory Committee to provide the assistance needed by the local school districts to advance in these areas. One of the primary considerations now receiving attention from the Colorado Department of Education and the Advisory Committee is a major need expressed both by the local school districts and by the local accountability advisory committees. This need is for a program evaluation procedure that will continously evaluate programs in terms of the districts' priorities, goals, and objectives. Such an evaluation procedure was approved by the State Board of Education in the spring of 1974; it will serve as a basic framework for the local districts to follow in evaluating their programs.

Evaluation Procedure

The Colorado Accountability Act directed the State Board of Education to develop an evaluation system that the local districts could use to measure the achievements of their educational programs and the impact of the programs upon student learning. The Colorado Department of Education appointed a subcommittee to formulate an initial design for this procedure. Members from the State Accountability Advisory Committee and from the local school districts served on the subcommittee. The drafted plan was presented to the Accountability Advisory Committee for review and recommendations. After revisions were made, it was presented to the Colorado State Board of Education and approved by the State Board in May of 1974.

The evaluation design outlines a series of six major steps which the local school districts can follow to provide for the continual upgrading of the districts' educational programs on an annual basis. The specific procedure that each district works out from the suggested steps in the evaluation plan is left up to the discretion of the district. Although the local school districts mainly have been using standardized and teacher-made tests to measure the achievements of their educational programs, there is an awareness that traditional testing only is not a wholly suitable measurement for a district's objectives. The evaluation procedure suggests criterion-referenced testing as another means for measuring achievement. The original plan outlines the six evaluation steps in detail, but they may be briefly stated as follows:

- *Description of the roles in an evaluation procedure* (who is involved and where located; where the areas of concern are and what should be looked at)
- *What is being measured* (quality in education through determining the degree of accomplishment in terms of student and staff objectives in the school buildings and districts; the strengths and weaknesses of the programs in terms of student and staff objectives; the effect the accountability process is having on learning and the program cost at the district and state level)
- *Information gathering* (what might be done to select needed and useful information; what means might be used to gather the information; and analysis of the data)

- *Reporting the information and facts gathered* (by whom, reporting dates, and kinds of information to be reported)

- *Use of the information and facts* (how used and where used)

- *Results from the use of the information* (major educational decisions) [8]

Objectives of the Local School Districts for 1974-75

Of the 168 local school districts reporting in the *Fourth Annual Report,* 145 districts stated what their objectives for 1974-75 would stress. They indicated the major emphasis in achieving accountability for 1974-75 would take place both at the local school district level and at the school building level.

At the school building level, broad student outcome objectives are to be matched with the educational programs in the buildings where the students are located. The changes resulting from the 1973-74 review and revision of curriculum and the consideration of alternative approaches to instruction are to be adapted to the school buildings.

At the local school district level, current work on student outcome objectives is to continue. Existing district-level objectives will be reviewed, and the development of staff objectives will be initiated. New and more effective approaches for the evaluation of the staff are to be considered and outlined to encourage personal and professional growth. The planning and operation of in-service training programs to meet staff needs brought about by changes in curriculum and instructional management will be developed. The design of local evaluation procedures to help the districts determine the success or failure of the achievement of their educational outcomes, as well as to assist the districts in using collected information, is to be continued.

To sum up the progress that is being made in Colorado with local district and state accountability programs, Table 1 indicates the directives in the Colorado Accountability Act that are accomplished or in progress and those that still have to be attained.

The State Board of Education, the State Advisory Committee, and the Colorado Department of Education have taken the approach of first establishing a firm foundation in the local districts for understanding the accountability process and working from one step to the next to attain accountable results. The Department of Education staff and the State Advisory Committee provide the technical assistance and support needed by the local districts as they move from one sequence to the next in the operation of their accountability plans. The three education bodies recognize that accountability is not an instantly attained goal, but requires substantial planning, time, and open communication between the state education agency and the local districts.

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[8] *Procedure for Evaluation Within the Accountability Process* (Denver: Department of Education, August, 1975), pp. 1-6.

Table 1
Status of Implementation of the Colorado Accountability Act

Directives Completed or in Progress	Future Objectives
State Accountability Advisory Committee appointed and functioning	Completion of local district student and staff performance objectives and putting them into operation at the school building level
Local Accountability advisory committees appointed and functioning	Completion of state goals revision, the first step in developing a state accountability program
Revised Rules and Regulations to administer Accountability Act adopted by the State Board of Education	Preparation of state performance objectives
Local district goals prepared by 98% of the local districts	Development of local evaluation procedures and criterion-referenced test instruments to measure achievements of educational programs and their impact upon student learning
Development of performance objectives by the local districts is progressing, though not completed by all of the districts	Development of a cost-benefit analysis approach for local district programs
Evaluation procedure adopted by the State Board as a guide for local district development of evaluation procedures	Assistance to local districts in the preparation of local reports for school patrons
State Annual reports prepared for the General Assembly	Application of results of evaluation to upgrade educational programs and direct future planning, decision making, and budgeting
Local district annual reports prepared for the State Board of Education	
Local district reports to school patrons prepared by majority of the districts	

* * * * * *

The next portion of Section III compares the methods used by Connecticut, Florida, and Michigan in conducting their state assessment programs, beginning with the development of state educational goals.

Development of State Educational Goals by Connecticut, Florida and Michigan

Introduction

Educational goals fall into three categories: (1) *learner outcome goals*, which are student-oriented and represent what a pupil should be able to accomplish at some point; (2) *process goals*, which are related to instructional methods and other classroom activities to facilitate attainment of learner outcome goals; and (3) *management goals*, which are organizational in structure and provide the support necessary for implementing both learner outcome goals and institutional goals. The discussion of goals in this report is directed mainly to learner outcome goals.

Learner outcome goals represent desired pupil achievement expressed in general statements of broad direction, purpose, and intent. Each state must work out its own process for establishing learner outcome goals. Most discussions about establishing goals state that it is essential to involve teachers because they may resent being accountable for goals they did not help to select. In addition to involving educators in determining goals, parents, students, community members, and anyone else who will be affected by the goal decisions should take part in their selection if they are to be fully effective. Determining goals is a political process because the goal decisions need to represent different values in the community or state, and compromises have to be made. Furthermore it is generally recognized that goals should not remain static but should be subject to evaluation and revision reflecting changes in society.

The subject areas of learner outcome goals are markedly similar in most states but are expressed in different ways and with varied degrees of emphasis to embody the concepts and philosophy of each state's educational system. The four states included in this report are no exception to this observation, despite the use of somewhat different methods to develop their goals. Listed are 11 broad goal areas, the first ten of which the four states have in common and to which all of their learner outcome goals can be related. The eleventh goal is cited by Michigan alone as important to develop within each individual. The subject areas of these goals are not listed in priority order:

1. Acquisition of basic skills
2. Development of the ability for creative, constructive, and critical thinking
3. Understanding of the democratic process; responsible citizenship
4. Occupational preparation and awareness; economic understanding
5. Development of aesthetic and cultural understanding and appreciation
6. Physical and mental health
7. Social development; human relations
8. Preparation for home and family relationships
9. Self-worth and self-understanding
10. Continuation of education beyond formal schooling
11. Appreciation, maintenance, protection, and improvement of the physical environment

How Colorado is revising its state goals already has been described; the methods used by Connecticut, Florida, and Michigan follow. Of these three states, only Michigan's state goals were mandated by law.

Connecticut Goals

Goals Group

The initial preparation of learner outcome goals in Connecticut was conducted by professional members of the Connecticut Department of Education who were abetted by the strong leadership of the state's Commissioner of Education. Federal grant requirements and the funds available made it necessary to use a tentative statement of goals developed by staff members and to present the statement to a representative cross section of the state's population for reaction at the same time the assessment was in progress in 1971-72. The Executive Group, a unit set up in the Connecticut Department of Education in February, 1971, to be responsible for the assessment, recommended three professional staff members to constitute a Goals Group.

The Goals Group proposed six major learner outcome goals that were derived from several sources: official state department positions and policies; National Assessment for Educational Progress; assessment reports of other states; Center for the Study of Evaluation (CSE) of the University of California; the New England Educational Assessment Project; special studies by the Belmont Project and the Joint Federal/State Task Force on Evaluation; and other relevant educational literature. A series of subgoals or broad objectives for each major goal was solicited by the Goals Group from the entire professional staff of the Connecticut Department of Education. These were reviewed by the Goals Group and refined to a number that totaled 82 subgoals.

Learner Outcome Goals and Mission Statements

The six major learner outcome goals initially proposed by the Goals Group were submitted to the Connecticut State Board of Education and were accepted, but not finally adopted, by the State Board of Education as working goals for use in the 1971-72 state assessment program. The Connecticut Department of Education now is in the process of reevaluating Department management goals which are being formulated as mission statements. The mission statements will be related to the learner outcome goals.

Public Survey of Learner Outcome Goals

The Connecticut State Board of Education contracted with the Institute for the Study of Inquiring Systems (ISIS) in Philadelphia to obtain public response and reaction to the proposed six major goals and 82 subgoals. The program was directed and monitored by the Executive Group.

The Commissioner of Education invited representation on two consulting committees from educational, health, fraternal, welfare, business, labor, industrial, and governmental organizations. These committees assisted in devising methods for disseminating the goals questionnaires to a cross section of citizens and provided to the State Board of Education reactions from their respective organizations regarding the results of the study.

The method for obtaining public response to the proposed goals involved a mail survey consisting of two forms. A long form contained all the goals and subgoals and was sent to educators and professionals. Ten different short forms, distributed to parents, students, and other lay persons, contained all six major goals and approximately 40 per cent of the subgoals. There was no distinction made between the main goals and the subgoals listed on the forms. All were presented in random order for the purpose of determining common attitudes held by various groups of persons. Respondents were asked for their age and sex, and whether they were a student, a parent, school teacher, administrator, or none of these. Approximately 25,000 copies of the long and short forms were distributed through mailing procedures, using the Connecticut Department of Education's news publication or delivery to the schools. A cross section of professional educators, community leaders, school board members, members of professional organizations, nonprofessional school employees, students, and parents were reached by this process. More than 9,000 replies were received that were suitable for analysis.

Priority Order

A major purpose of the study was to establish the goals in priority order so that a series of subject areas could be scheduled for assessment. The frequency of response for the six major goals cited at random among the 82 subgoals resulted in a placement of first, eighth, eleventh, thirteenth, and twenty-fourth in rank. When one studies the subgoals chosen in preference to a major goal, it is evident that all the selected subgoals are related to one of the major goals. The major goals are stated more broadly than many of the subgoals. The major goal that won first place among the respondents states that each student should "learn to communicate effectively." The first assessment in reading measured part of this goal.

Florida Goals

Florida's educational goals were developed by a group of Florida Department of Education staff members who made a study of the goals developed by other states and proposed a set of goals for circulation within the Department for criticism. Public involvement could not take place because of the immediate deadlines created by the Florida Educational Accountability Act of 1971. The law required assessment of statewide objectives for reading less than a year after it was enacted. The Florida Department of Education determined that a set of broad educational goals should be used as a basis for the formulation of the learner outcome objectives required by the Florida Accountability Act and that the goals should guide the direction of management planning to improve the state educational system. After the Florida Department of Education approved the proposed set of goals, they were adopted by the State Board of Education early in 1971.

All of Florida's goals are expressed in terms of goal areas which contain several subgoals. There are seven learner outcome goal areas with 18 subgoals and three management goal areas with 11 subgoals. The management goals identify the state's responsibilities for developing and implementing strategies that will help students achieve the learner objectives, and they call for an evaluation of the state system of public education in terms of student achievement and the efficiency of the educational system's processes. The Department of Education staff feels that the learner outcome goals are expressed broadly enough to be appropriate at the local district and school level, and they are supplemented by local district goal statements. Florida does not have a set goal review procedure, but will modify the goals as social concerns change; nor are the goals stated in priority order. The Florida Department of Education staff members feel that the question of priority is more applicable to objectives than to goals.

Michigan Goals

The earlier Michigan assessments of 1969-70, 1970-71, and 1971-72 measured the performance of schools and students in terms of a generally agreed upon goal of "achievement in the basic skills." The Common Goals of Michigan Education, as they are titled, were not adopted until the Fall of 1971. Michigan chose the task force and citizen survey route to establish goals.

Task Force on Goals

The Task Force on Goals, which was appointed by the Michigan State Board of Education in early 1970, was composed of 21 members who represented teachers, school superintendents, homemakers, businessmen, religious congregations, students, state universities, Michigan Department of Education staff, local boards of education, and citizens. The Task Force was asked to develop and draft a statement of educational goals against which the assessment program could be measured. Recommendations were presented by the Task Force to the State Board of Education in June, 1970, and the Board made revisions and additions in the goals document.

The Common Goals of Michigan Education

A tentative statement of goals was distributed to 25,000 Michigan educators and interested citizens in December, 1970. In the spring of 1971, a series of 25 public meetings was held in intermediate and local school districts to obtain the opinions and desires of local citizens and educators regarding the tentative set of goals. The Michigan State Board of Education analyzed the opinions and concerns and revised the goals accordingly. The Common Goals of Michigan Education were adopted by the Michigan State Board of Education in September, 1971.

The goals are intended to be common to all public school systems in the state. Local school districts are encouraged to expand upon the state's Common Goals and develop their own local district and school goals appropriate for their school systems.

The goals contain three process-oriented goals which describe what criteria schools must meet to help students develop and achieve, as well as six management goals concerned with the conditions necessary for the success of a school operation. Thirteen additional goals specify desired learner outcomes. They are not listed in priority order.

Goal Review

The Michigan Department of Education believes that the goals should be reviewed in the long term and has established a review procedure. The Council on Elementary and Secondary Education also will be reviewing the goals annually for changes that new information may suggest.

Table 2 sums up for comparison the principal approaches taken by each of the three states to develop goals and the kinds of goals that were developed.

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The next portion of Section III discusses the development of performance objectives by Connecticut, Florida, and Michigan for the purpose of measuring progress toward the attainment of the stated goals.

Table 2
Development of State Educational Goals

CONNECTICUT	FLORIDA	MICHIGAN
Legal Requirements	*Legal Requirements*	*Legal Requirements*
None	None	State goals mandated
Steps in Goal Development	*Steps in Goal Development*	*Steps in Goal Development*
Tentative statement of goals developed by SDE staff Derived from offical SDE policies; NAEP; other states' goals; relevant educational literature Goals accepted in 1971 by State Board of Education for use in 1971-72 assessment, but not formally adopted Contracted with commercial firm to obtain public response and priority order of goals using mail survey of state's citizens	Developed by SDE staff and circulated within SDE; no public involvment due to time constraints Derived from other state's goals Adopted by State Board of Education in 1971 Goals will be modified as social concerns change	Task Force appointed with broad public/professional membership to draft statement of goals Draft statement proposed by Task Force revised by State Board of Education Tentative goals draft submitted to 25,000 citizens and educators throughout state Public meetings held in local districts to obtain reaction to goals Following analysis of citizen opinions, final version of goals adopted by State Board of Education Review procedure established by SDE for long-term use
Products	*Products*	*Products*
Six major learner outcome goals and 82 subgoals in priority order	Seven learner outcome goals; three management goals; 30 subgoals	Three process-oriented goals; six management goals; 13 learner outcome goals

Development of Performance Objectives by Connecticut, Florida, and Michigan

Introduction

The outcomes of student behavior or performance can be measured in terms of performance objectives that evolve from or are related to stated goals. The development of performance objectives can be managed by a commercial firm that specializes in the preparation of performance objectives, or the objectives can be developed by the staff of an education agency with the help of the agency's own consultants and subject area specialists, as well as professional educators from local district schools, universities, and educational organizations in the state. Many statements of performance objectives already exist and are available to state education agencies for review and possible adoption after they have been adapted to the state's own goals. Initial sets of objectives can be prepared by these methods and then be reviewed not only by the professional educators in the state, but also by the state's citizens, students, parents, legislators, and members of the boards of education. A review of performance objectives by different groups of persons is a time-consuming project but a very important one in the long run for improving the objectives and for gaining acceptance of their use in an assessment or evaluation program. Most states contract with a commercial firm to obtain performance objectives for beginning assessments, but after one or two years of experience, the assessment staff is apt to involve the state and local district professional educators and citizens in the development and review of performance objectives.

The methods used by the three states to prepare performance objectives are described in this portion of Section III. Florida and Michigan in particular have had wide experience in the development of performance objectives and have prepared catalogues of objectives over a period of several years; this entailed considerable participation by professional and lay persons in these states. Both states are continually looking for ways to improve their objectives; they now are proposing new methods for developing and revising them.

Connecticut Objectives

Connecticut's first assessment was conducted in March, 1972, for reading, and it was determined that it should parallel the National Assessment of Educational Progress to save time and money and to provide comparative data on a state, regional, and national basis. It was the first completed state assessment in the country that was based upon NAEP models and materials, according to a letter written to the Commissioner of Educaton in September of 1972 by the administrative director of the National Assessment of Educational Progress. Maine must have been a close second because the first Maine Assessment of Educational Progress was conducted in May of 1972 in citizenship and writing, and it too used the National Assessment model.

Four of the learner outcome reading objectives that were formulated by reading specialists and other educators in the Connecticut Department of Education for a representative sample of 9-, 13- and 17-year-old public school students were matched to National Assessment objectives and released test exercises. A fifth objective could not be measured by any of the released NAEP items and was omitted. The matching was performed by the contractor, the Institute for the Study of Inquiring Systems, Philadelphia.

Approximately ten objectives were measured in the February, 1975, assessment. Connecticut again matched their objectives with NAEP objectives and test exercises for the majority used in the assessment, but also included some that were chosen by a science committee of six Connecticut teachers from an objective bank supplied by Measurement Research Center.

In the second assessment in reading, which took place in the fall of 1975 for eighth graders, the majority of the objectives were selected by Connecticut teachers and reading specialists from a commercial firm. A few NAEP objectives were used to permit comparisons with the first reading assessment results. The Connecticut Department of Education feels that local involvement in the selection of objectives will encourage greater acceptance of the program's results at the local level.

Florida Objectives

Initial Development

Florida's first assessment in 1971-72 in reading had to take place less than a year after the Florida Educational Accountability Act was passed, imposing serious constraints on the development of objectives and test items. The Research and Development Section of the Florida Department of Education contracted with the Center for the Study of Evaluation (CSE), University of California at Los Angeles, to supply a catalogue of reading objectives and items for grade 2 (age 7) and grade 4 (age 9).

Committees in each Florida school district, totaling 112 reading specialists and 236 classroom teachers, were asked to determine the grade level at which each objective should be achieved and then to select the objectives with the highest priority from the CSE catalogue. No limitation was placed on the number of objectives that could be selected, and the result was that almost all were chosen. Since there were too many objectives to assess, a reading consultant was hired to reduce the list to a more practical size.

The Evaluation Section of the Florida Department of Education then organized the reduced list and submitted it for approval to the State Board of Education. The objectives were adopted by the State Board in September, 1971.

Expanded Procedure with Local District Participation

From this approach, Florida turned to more in-state educators, teachers, and lay persons for developing performance objectives. For the 1972-73 assessment, preliminary catalogues of performance objectives were prepared under contract by Dade County for mathematics, by Broward County for writing, and by Florida State University for reading, the three subject areas that were required by law to be assessed in 1972-73. The local districts' and University's activites were supervised by the Research and Development Section and by subject area specialists in the Florida Department of Education. An advisory committee in each of the three subject areas worked with the subject area specialists and made a preliminary selection of the mathematics, reading, and writing objectives from the completed catalogues.

Through its district coordinator of accountability, each district was requested to form committees to select the objectives to be measured in the assessment program. Membership on the committees was determined by the districts, but the district coordinator suggested that teachers, administrators, curriculum specialists, parents, students, and other lay persons be included. Selection of the objectives by the committees took place from April to June, 1972. The committee members were asked to select a limited number of objectives from a preliminary list for each grade and age level. A consolidated response was prepared by each district that indicated the objectives the district believed should be included. The tabulations of the district responses showed the total number of districts that selected an objective and the weighted proportion (by population) of districts that selected an objective. The tabulations were used by the subject area consultants and advisory committees to choose a final set of statewide objectives.

The final lists again were returned to the districts to make sure that no important objectives were omitted. Following final approval from the school districts, the objectives were presented to the Florida State Board of Education for adoption. Objectives in reading, writing, and mathematics for students 8, 11, and 14 years of age were adopted in August, 1972. They were published under a 1972 copyright, and they were made available to the districts for use as instructional resources as well as for the state assessment program. Science objectives, used for the first time in the 1973-74 assessment, were developed by the same method.

Procedure Proposed for Future Development

This instructionally oriented process for selecting performance objectives has been followed by the Florida Department of Education up to the present time, but the Department now is proposing a new procedure for the future. Staff members feel that several problems arose because of the specificity of the objectives. The primary problem was that the objectives were too detailed to communicate to the public or the Florida State Legislature. Specificity also restricted the form of a test item when there might have been a more effective way to measure a skill. Furthermore many objectives represented intermediate instructional goals rather than terminal outcome goals. One of the 1974 amendments to the Florida Educational Accountability Act of 1971 requires that major, terminal objectives be established.

The Florida Department of Education's new plan sets up an advisory committee to identify the essential terminal skills that every child should be expected to attain, as a minimum, upon completion of his or her education. Representation on the committee favors noneducators and includes parents, legislators, and members of business organizations, as well as members of some educational associations.

The terminal skills the advisory committee selects will be analyzed by subject area specialists to determine the particular proficiencies necessary to acquire the terminal skills and at what age and grade level. Objectives will be worded as general skill statements which can be understood more readily by the public than were previous specific performance objectives. To establish uniform constraints for item construction, the minimum and maximum limits of what is expected of each skill at each grade level will be specified.

Local district committees will substantiate the appropriateness and completeness of the objectives, after which they will be adopted by the Florida State Board of Education on a three-year basis in order to furnish stability to the state assessment program and to give the districts time to provide instruction in the skills. Students will be assessed on the objectives at three to five intervals during the school years. A procedure will be instituted for reviewing and revising the objectives to maintain their relevancy.

Michigan Objectives

Michigan has been developing performance objectives by a systematic procedure for the past several years. For the first four years of the Michigan assessment program, beginning in January, 1970, the performance of students in grades 4 and 7 was measured in terms of a generally agreed upon goal of "achievement in the basic skills," and norm-referenced tests were used. Objective-referenced tests, developed along with the effort to prepare performance objectives, were first used to measure performance objectives in reading and mathematics, grades 4 and 7, in the 1973-74 assessment.

Workshops

The development of minimal performance objectives* to measure the adopted set of 1971 goals began in 1971 with a preliminary series of workshops in each subject area under the direction of the Michigan Department of Education's Instructional Specialist Program of the General Education Services. The workshops were attended by subject area educators at various levels, including representatives from local district schools, universities, and teachers' councils such as the Detroit Area Council of Teachers of Mathematics. These educators worked in cooperation with curriculum and research specialists in the Michigan Department of Education.

Eleven of these groups were organized for workshops held in the fall of 1971 to prepare the initial drafts of minimal performance objectives for grades K-9 in the eight subject areas of mathematics, science, social studies, communication skills (including foreign language), art, music, health, and physical education. Before drafting the objectives, each member of each group was asked what he or she thought should be the minimum expectancies in his or her specialized area for Michigan pupils at the end of a specific grade level.

Drafts from the 11 groups were sent to additional Michigan educators and teachers in all regions of the state to obtain their comments and appraisals, a process which resulted in preliminary revisions. The responsibility for the dissemination of each draft was assigned to an instructional specialist in the Michigan Department of Education, and the specialist maintained a list of those persons who reviewed and revised the objectives.

Grade Level Commissions

The drafts with the preliminary revisions were sent next to 13 Grade Level Commissions, established in November, 1971, composed of school administrators, LEA board members, teachers, curriculum specialists, parents, and lay citizens, the last of whom were nominated for membership by various professional and civic organizations in the state. At least two revisions and sometimes more resulted from each of these reviews.

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*A minimal performance objective is defined by Michigan as one that represents a necessary skill, knowledge, or understanding, commonly taught in all the schools, which nearly all pupils should be expected to learn by the end of a specific grade level—ED.

Elementary and Secondary Education Council

The revised objectives then were sent to the 25-member Elementary and Secondary Education Council, an advisory body appointed by the Michigan State Board of Education and made up of professional educators from educational organizations and institutions of higher education, parents, and lay persons. After review and suggested revisions by this group, the objectives were sent to the Michigan State Board of Education for final review, adoption, and distribution to the state's schools.

Subject Areas of Michigan Objectives

The Michigan State Board of Education adopted in 1973, and published in 1973 and 1974, performance objectives in the eight learning areas for various grades from kindergarten to Grade 12 as shown in Table 3.

Table 3

Subject Area and Grade Level of Michigan Performance Objectives Adopted and Published by State Board of Education

Subject Area	Grade Level (end of)
Mathematics (arithmetic, measurement, geometry, algebra, probability, and statistics)	Represents a continuum: K-3, 4-6, 7-9
Communication skills (reading, speaking/listening, writing)	Grades 3, 6, and 9
Foreign language (French, German, Spanish)	Nongraded
Science	Grades 3, 6, and 9
Physical education	Grades 3, 6, and 9
Health	Grades 3, 6, and 9
Music (elementary, secondary, and instrumental)	Grades 3, 6, 9, and 12
Art (elementary in affective domain)	Grades 3 and 6
Art (secondary in affective, psychomotor, and cognitive domains)	Grades 9 and 12

Participation of Special Groups

It may be interesting to the reader to note which special groups in Michigan were represented in the development of the performance objectives in the several subject areas:

Mathematics	Michigan Council of Teachers of Mathematics
	Detroit Area Council of Teachers of Mathematics
	Greater Flint Council of Teachers of Mathematics
Communication Skills	Michigan Council of Teachers of English
	Michigan Intermediate Reading Association
	Michigan Reading Association
	Michigan Speech Association
Foreign Language	Michigan Foreign Language Association
Science	Metropolitan Detroit Science Teachers Association
	Michigan Association of Science Education Specialists
	Michigan Science Teachers Association
Physical Education	Michigan Association for Health, Physical Education and Recreation
	Upper Midwest Regional Interstate Project
Health Education	Health education professionals, but no specialized group
Music	Michigan Music Educators' Organization
	Michigan School Band and Orchestra Association
	Michigan School Vocal Association
	Michigan Chapter of the American String Teachers' Association
Art	Michigan Art Educators' Association
	Michigan Art Education Directors' Organization

Current Plans

The Michigan Department of Education initiated a field testing program in 1974 in which teachers volunteered to use the assessment objectives for validation purposes. The objectives in this program have been evaluated by 11 elementary schools and seven secondary schools. The Department of Education also is contracting for a survey of educators to determine whether the educational profession agrees that the published objectives constitute essential minimal skill objectives desirable for most students to attain.

Contracts were issued to the Michigan Council of Teachers of Mathematics and the Michigan Reading Association to obtain their recommendations for improving the quality of the objectives and the assessment program, following a review of the results of the 1973-74 assessment.

Early in 1975 the Michigan State Board of Education adopted a statement which recommended that expansion of the assessment program to the first, tenth, and twelfth grades be postponed for two years, but that pilot testing of the assessment items for these grades be continued. Performance objectives for grade 12 are being developed for pilot testing. Pre-primary objectives in cognitive, affective, and psychomotor domains for grade 1 were pilot-tested during the 1974-75 and 1975-76 assessments. Grade 10 objectives in reading and mathematics were pilot-tested in the 1975-76 assessment. All of the performance objectives for grade 10 were taken from the sets of grade 7 through grade 9 performance objectives published by the Michigan Department of Education. Twenty of the grades 7-9 reading performance objectives were chosen for use in item writing, and 71 out of 155 mathematics objectives were selected to be measured first. The mathematics objectives were chosen by representatives of the Michigan Council of Teachers of Mathematics.

Another State Board of Education recommendation expressed in 1975 stated that the Board should expand its efforts in developing the affective domain and provide humanistic education for the state's students. A commission has been appointed to draft affective domain objectives for grades K-9. Staff members of the Michigan Department of Education are studying the affective dimension of the existing performance objectives and are investigating new affective measurements.

Plans for Revision of Objectives

Only a portion of the performance objectives adopted by the Michigan State Board of Education has been measured in the assessment program, so that Michigan now is in the process of refining, clarifying, and revising its objectives rather than developing new ones (except objectives for grade 12 to be pilot-tested in the future). The process of revising the objectives is a joint effort of the Michigan Educational Assessment Program and the Instructional Specialist Program (ISP) of the General Education Services, with primary responsibility assigned to ISP. Plans for revision are stated in a tentative, long-range plan for the Michigan Assessment Program which is being considered by Michigan's State Board of Education. The plan contains several steps and involves large numbers of Michigan educators. Since the plan is still in the discussion stage,[7] suffice it to say, in general terms, that it constitutes a large mail review of performance objectives in particular subject areas directed to teachers of the subject areas. The comments of those working with low achievers and minority students will receive special attention. The comments will be reviewed by a general review group and specialized review groups with broad representation among professional and lay people. Drafts of revised objectives will be prepared by ISP for the Superintendent of Public Instruction and the State Board of Education.

Table 4 indicates the most recent steps taken by Connecticut, Florida, and Michigan for the preparation or revision of performance objectives.

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The development of test instruments to measure the performance objectives established by the three states is the next topic in Section III.

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[7] *The Long Range Plan for the Michigan Educational Assessment Program* (Lansing: Department of Education, 1974).

Table 4

Recent Plans for the Preparation or Revision of Performance Objectives

CONNECTICUT	FLORIDA	MICHIGAN
The majority of the objectives for the state's assessment program will be selected by Connecticut teachers and subject area specialists from a commercial source. A few NAEP objectives will be used to permit comparisons with previous assessment programs.	An advisory committee with representation favoring noneducators will identify essential terminal skills every pupil should master. The terminal skills will be analyzed by subject area specialists to determine the particular proficiencies needed to acquire them. Objectives will be worded as general skills statements rather than in specific terms, accompanied by the maximum and minimum limits of what is expected at each grade level. Local committees in each district will verify the objectives. Final objectives will be adopted by the State Board of Education for a three-year period to provide stability to the state assessment and to allow districts time to give instruction in these skills. A review process will be established to keep the objectives current.	An appointed committee is drafting affective domain objectives for grades K-9. Performance objectives are being developed for twelfth-grade pilot testing. A field testing program has been initiated in which teachers volunteer to use the objectives for validation purposes. Contracts were issued to the Michigan Council of Teachers of Mathematics and the Michigan Reading Association to obtain their recommendations for improving the quality of the objectives and the assessment program. A tentative plan for revising objectives involves a large mail review of objectives in particular subject areas directed to teachers of the subject areas. Comments of teachers working with low achievers and minority groups will receive special attention. A general review group with wide lay and professional representation and specialized groups composed of professional staff and some lay persons will review the analysis of the mail survey. A draft will be prepared of the objectives, taking into account the review groups' comments. The draft will be submitted to the State Board of Education for approval.

Development of Assessment Test Instruments by Connecticut, Florida and Michigan

Introduction

Most of the states in the country enter into contracting for the acquisition of test items, particularly for a beginning assessment when time pressure is involved, facilities and staff are limited, or large numbers of students are participating in the assessment. Sources of test items include commercial testing companies, university-based research centers, private nonprofit organizations, and private development centers. National Assessment for Educational Progress (NAEP) supplies test items without cost. Some states have developed their own items with the help of local teachers and subject matter specialists, but usually in such instances the items are the property of the state and are protected by a copyright, as in the case of Florida and Michigan. Florida maintains that it was the first state to construct objective-referenced tests of its own to measure performance objectives in a statewide assessment program.

When a state initially chooses to develop its own test items for an assessment, the items generally are selected with the help of a contracted firm from existing items that have been tested for validity, are consonant with the state's objectives, and are adaptable for use in the state's particular assessment program. Test items for use in later assessments then may be written by the state's educators in training sessions, with assistance from department of education specialists and commercial firm specialists. Through this process, pools of items are built up, tried out, and revised until a final version is formulated.

Both norm-referenced and objective-referenced tests are used to measure a state's objectives. The former have been available for a good many years from various publishers; in recent years, several major publishers have been distributing objective-referenced tests. Connecticut and Florida have used objective-referenced tests from the onset of their assessment programs. Michigan began their program with norm-referenced tests and used them for the first four years. Objective-referenced testing was started by Michigan for the first time in the 1973-74 assessment program.

Table 5 includes the many sources and groups that have been involved in the development and selection of test items in Connecticut, Florida, and Michigan.

Table 5

Sources and Groups Involved in the Development of Test Instruments

CONNECTICUT	FLORIDA	MICHIGAN
DOE staff National Assessment for Educational Progress (NAEP) Institute for the Study of Inquiring Systems Research Triangle Institute Westinghouse Learning Corporation Committees of teachers and subject area specialists	DOE staff Center for the Study of Evaluation of the University of California State reading consultant Harcourt, Brace Jovanovich Educational Testing Service Westinghouse Learning Corporation Review groups of Florida university & public school teachers, DOE staff, and lay persons Local school districts Florida State University National Assessment for Educational Progress (NAEP)	DOE staff Educational Testing Service California Test Bureau/McGraw-Hill Measurement Research Center American Institute for Research Item panels of Michigan teachers, university professors, school counselors and psychologists, and DOE staff curriculum specialists for each subject area Local school districts Professional organizations in other subject areas In the future, Michigan plans to tap the resources of educators in other states, NAEP, commercial publishers, and independent test writers for collecting a large pool of items

For the first assessment undertaken by each of the three states, Connecticut used NAEP released test items; Florida contracted for test items from the Center for the Study of Evaluation at UCLA; and Michigan's first test items were supplied by a commercial firm working with an *ad hoc* committee composed of Michigan educators and parents. As the states gained expertise over the years, the methods used by Florida and Michigan for the preparation of test items encompassed the services of their own educators, either from the local school districts and universities, or both. Connecticut is just beginning to involve the state's teachers in the selection of test items. The following narrative describes in more detail the methods followed by each of the three states in the development of test items. Tables 6, 7, and 8 indicate the kinds of tests used and the subject areas and grade levels assessed by the three states during each year of their assessment programs.

Connecticut Test Instruments

First Reading Assessment

Connecticut contracted with the Institute for the Study of Inquiring Systems (ISIS) of Philadelphia for the state's initial reading assessment given in February of 1972. In order to permit comparisons by age, sex, and community size on a state, regional, and national basis, the Connecticut reading assessment used available instruments and applicable procedures developed by National Assessment. The test items were selected by ISIS in cooperation with the Department of Education staff.

Matching with NAEP Items

In November, 1971, National Assessment released to ISIS approximately 220 of the reading exercises that were going to be disclosed to the public in May or June of 1972. Six criteria for selecting the test items were established in order to ensure maximum comparability between Connecticut's test instruments and procedures and those of National Assessment. The criteria were:

1. The content and time allowed for replying to each question in the NAEP exercises used for the assessment would not be altered.
2. The total administration time for any one test package would not be more than 50 minutes.
3. Items would be chosen to represent all of Connecticut's reading goals, as far as possible.
4. Items of diverse difficulty levels would be selected in the same degree as they appeared in the NAEP release items.
5. The number of questions in each test package would be kept between 19 and 22.
6. Exercises that were suitable for group administration only would be used.[8]

ISIS developed the assessment instruments separately for each age group (9, 12, and 17). As a first step, all of the NAEP released items were listed with the Connecticut objectives indicated, the administration time alloted, and the NAEP difficulty level assigned. Other NAEP items were identified which used the same text with different questions so that two exercises with the same text would not be used in the same package.

One of Connecticut's five objectives could not be measured by any of the released items and was not assessed. Of the remaining four objectives, test items for two of them were seldom found but items for the other two were more abundant. Accordingly, *all* of the multiple choice items that were seldom found for the two objectives were selected, and a choice was made only from the items that appeared frequently for the other two objectives.

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[8] *Report on the Assessment of Reading Skills of Connecticut Public School Students* (Philadelphia: Institute for the Study of Inquiring Systems), p. 5.

Table 6

Subject Areas and Grade Levels Assessed and Types of Test Instruments Used By Connecticut

Date	Subject Area	Age/Grade Level	Type of Test
February, 1972	Reading	Ages 9, 13, 17	Objective-referenced; multiple choice; adapted from NAEP exercises
February, 1975*	Science	Ages 9, 13, 17	Objective-referenced; multiple choice; some open-ended; most adapted from NAEP exercises; and a few from commercial sources
Fall, 1975	Reading	Age 13	Objective-referenced; multiple choice; some open-ended; most from commercial sources; a few adapted from NAEP exercises

*Due to uncertainties of federal funding in FY 1973 and late budget approval for FY 1974 by Congress in December, 1973, Connecticut's planned second year of assessment for 1973 was postponed until 1975.

Table 7

Subject Areas and Grade Levels Assessed and Types of Test Instruments Used By Florida

Date	Subject Area	Age/Grade Level	Type of Test
February-March, 1972	Reading	Grades 2,4 (Ages 7,9)	Objective-referenced; mostly multiple choice, but some free responses
February-March, 1973	Reading, writing, mathematics	Grades 3, 6, 9 (Ages 8, 11, 14)	Objective-referenced; multiple choice, with some supply and construction items
February-March, 1974	Reading, writing, mathematics	Grades 3, 6, 9	Objective-referenced; multiple choice
	Science	Grades 6,9	Objective-referenced; multiple choice
February, 1975	Reading, writing, mathematics	Grades 3,6	Objective-referenced; multiple choice
October, 1975	Reading, writing, mathematics	Grades 3,6	Objective-referenced; multiple choice
	Reading	Grade 5	Norm-referenced

Note: Florida also conducted an NAEP-matched assessment in reading and mathematics for 9-, 13-, and 17-year-olds during 1974-75 so that state performance could be compared with national and regional performance in accordance with the directive in the amended Accountability Act. Testing took place in December, 1974, for age 13; in January, 1975, for age 9; and in March, 1975, for age 17. NAEP objective-referenced test items were used.

Table 8

Subject Areas and Grade Levels Assessed and Types of Test Instruments Used By Michigan

Date	Subject Area	Age/Grade Level	Type of Test
January, 1970 (1969-70)	Vocabulary; reading; English expression; mathematics; attitude	Grades 4, 7	Norm-referenced; multiple choice
January, 1971 (1970-71)	Vocabulary; reading; mechanics of written English; mathematics; attitude	Grades 4,7	Norm-referenced; multiple choice
January, 1972 (1971-72)	Word relationships; reading; mechanics of written English; mathematics	Grades 4, 7	Norm-referenced; multiple choice
January, 1973 (1972-73)	Word relationships; reading; mechanics of written English; mathematics	Grades 4,7	Norm-referenced: multiple choice
September-October, 1973 (1973-74)	Reading; mathematics; word relationships; attitude (optional)	Grades 4, 7	Objective-referenced; multiple choice; attitude anonymous group measures
September-October, 1974 (1974-75)	Mathematics; reading	Grades 4, 7	Objective referenced; multiple choice
	Word relationships (optional)	Grades 4, 7	Norm-referenced; multiple choice
	Attitude (optional)	Grades 4, 7	Anonymous group measures
	Pre-primary in cognitive, affective, psychomotor domains	Grade 1 (pilot)	Objective-referenced; most items open-ended; some group and some individually administered in sampling of schools
	Science; mathematics	Grades 4, 7 (tryout)	Objective-referenced; not for reporting student results; used in sampling of schools
Spring, 1975	Reading; mathematics	Grade 10 (pretest)	Objective-referenced
September-October, 1975 (1975-76)	Reading; mathematics	Grades 4, 7	Objective-referenced
	Pre-primary in cognitive, affective, psychomotor domains	Grade 1 (pilot)	Objective-referenced; administered to sampling of schools
	Reading; mathematics	Grade 10 (pilot)	Objective-referenced administered to a limited number of volunteer high schools
	Reading; health; mathematics	Grades 4, 7 (tryout)	Objective-referenced; used in a sampling of schools

Test Package

A random selection of the test items was made for a test package that took approximately 35 minutes of administration time, with 15 minutes necessary for instructions. Test items were interchanged as necessary to retain a uniform, overall time structure and to rectify the proportional distribution of the difficulty level. There were approximately 20 items in each test package. The tests were timed, and tape-recorded instructions were provided to maximize uniform administration practices throughout the state.

Pretesting

ISIS hired a staff to conduct a pretest of the administration procedures at six schools, two at each grade level, which were not to participate in the assessment. State Board of Education personnel efforts assured cooperation from the districts. The pretest indicated whether the oral and taped instructions were adequate and understood by the students and provided information necessary to prepare training instructions for the test administrators.

Science Assessment

Connecticut's next assessment was conducted in February, 1975, in the subject area of science. Research Triangle Institute was the contractor. Again, data were collected on the basis of a probability random sampling of schools.

The majority of the test items for the science assessment were adapted from NAEP exercises, but some were selected by a committee of six local school teachers from available published test items. Connecticut is beginning to involve its local educators in the selection of objectives and test items in order to gain more local acceptance of the results of the assessment. The items were field-tested by Research Triangle Institute in North Carolina to determine whether the administration procedures were adequate. Most of the test items were multiple choice, but a few were open-ended questions. There were approximately 25 items to a test; they were timed and took about 45 minutes of administration time. Tape-recorded instructions were used.

Also included in the 1975 assessment for science was a school questionnaire to obtain demographic data and a student questionnaire, designed by a committee of teachers, to determine the pupils' attitudes toward science. The questions mainly centered upon the science courses the pupils had taken and how they felt about them.

Second Reading Assessment

At the time of the Connecticut science assessment, a trial testing in reading of all 17-year-old students, rather than a sampling, was conducted in one local school to determine whether the results could be used to advantage by a specific local community. This trial census testing is to be enlarged upon in the second reading assessment of a sample of eighth grade students in the fall of 1975. The census assessment testing will be offered at that time to all local schools who wish to participate. The Department of Education will supply the schools with the tests and provide training in administration procedures. Local data will not be collected for state use, but the local schools will be able to get their local results as well as the state results for use as a measure of the local performance.

Most of the test items in the second reading assessment will be selected by Connecticut teachers and subject area specialists from a commercial source. Some NAEP items will be used in order to make comparisons with the results of the first reading assessment.

Florida Test Instruments

First Assessment

While responsibility for administering the Florida State Assessment Program is in the hands of the Evaluation Section of the State Department of Education, the development of objectives and test items initially was the responsibility of the Research and Development Section of the Department. Objectives, test items, and assessment procedures for the first assessment in Florida had to be developed in less than 12 months in order to meet the deadline imposed by the Educational Accountability Act. To do so, the Research and Development Section contracted with the Center for the Study of Evaluation (CSE) of the University of California at Los

Angeles for a catalogue of reading objectives and related objective-referenced test items to measure those objectives finally selected from the catalogue by subject area specialists in the Florida Department of Education.

Test Package Format

CSE arranged the test items into four forms each for grades 2 and 4, prepared administration instructions, and delivered all the materials in camera-ready format. Modification and replacement of some of the items delayed delivery for two months. After all the materials were received from CSE, and following State Board of Education approval of the test items, the Evaluation Section of the Florida Department of Education prepared printing specifications and instruction manuals. There were 116 items for grade 2 objectives and 291 items for grade 4 objectives. Some objectives were measured by two or more items, and not all objectives had items prepared for them.

Test items for each grade were divided into four test forms with each form given to a different sampling of students. All items that measured a single objective were on the same test form. Some items required more time than others to answer, but each form was designed to take about the same amount of administration time. Thus, the number of items of the test forms for each grade varied slightly. Grade 2 test forms had 28, 29, 29, and 30 items respectively; grade 4 test forms had 73, 77, 72, and 79 items respectively. Each test form measured approximately one-quarter of the objectives. The tests were not timed. The second grade forms took about one hour; the fourth grade forms took approximately two hours.

Pretesting

Test items were sent to selected schools for pretesting in the spring of 1971 to eliminate items that did not measure objectives adequately. Assessment procedures also were pretested by 25 grade 2 pupils for the purpose of checking instructions and to estimate the time needed for administering a full-scale assessment test. A pre-assessment study of multiple-matrix sampling, the method used in the Florida assessments, was done in one county. Trial versions of the sampling plan also were sent to three school principals to obtain their judgment of the adequacy and clarity of the directions.

Validation

A validation study of the test items was undertaken after the assessment was conducted but before results were published. The Florida Department of Education's Evaluation Section and the state reading consultant prepared a form on which a review group evaluated the content validity of each item. The review group consisted of educators from several Florida universities, Department of Education staff, and lay persons. They were asked to determine what items should not be reported in the results because of serious technical difficulties or because they did not appear to be a valid measure of an objective. As a result of this review, the group recommended that 32 per cent of the objectives not be reported in the results.

Second Assessment

More in-state educators were involved in the development of test items for Florida's second assessment in 1972-73. Initial test items were supplied by two local school districts and Florida State University, under contract to the Florida Department of Education. All of the reading, writing, and mathematics test items then were reviewed by a commercial testing firm, Harcourt, Brace and Jovanovich, for content validity and appropriateness for the grade level being assessed. More than 80 per cent of the items were revised, and another 10 per cent were replaced by the testing firm. Objectives that could not be measured because they required the use of unobtainable props, or because scoring criteria had not been developed for questions requiring written responses, also were identified by Harcourt, Brace and Jovahovich.

Pretesting

Approximately 200 students from each grade level participated in pre-test, post-test studies. They were conducted to determine the reliability of the test instruments on the premise that if the tests were reliable, the proportion of students who achieved success on the pretest would be comparable to the proportion who achieved success on the posttest. The results indicated that the tests were satisfactory in respect to this premise.

Test Package Format

The number of test items by grade level and by subject areas worked out as follows:

Grade	*Mathematics*	*Reading*	*Writing*
Grade 3	192	110	57
Grade 6	208	210	110
Grade 9	196	152	124

Three different test forms were prepared for each grade, and all subject areas were included on each form of the test. The cover of each form was a different color for easy identification of test forms. All third-grade tests were printed in colored inks; grades 6 and 9 tests were printed in black ink. A five-digit number was assigned to each test booklet which was used to identify a student's responses, rather than his name, in analyzing test results. The tests were not timed. Testing time took not more than 40 minutes for the third grade, 120 minutes for the sixth grade, and 150 minutes for the ninth grade.

Validation

Following test administration, test items were reviewed by subject area specialists in the Florida Department of Education and by a panel of Florida public school and university teachers. Items the panel and subject area specialists considered to be invalid were deleted, and therefore no results were reported for three third-grade mathematics objectives.

Third Assessment

For the 1973-74 assessment, test items were prepared by Educational Testing Service and Florida subject matter task forces. The test forms were designed and printed by Educational Testing Service. The test for each grade was made up into two forms with a different set of objectives measured on each form. The majority of the students took one form of the test; those in the very small schools took both forms of the test.

For the first time in the assessment program, the tests were timed at each sitting with what was thought to be enough time allowed for all or almost all of the students to complete the questions. Test administrators indicated at the end of the assessment, however, that the time alloted was insufficient for some of the questions, and the high omission rate in the responses at the end of each sitting seemed to verify this observation.

Test Specifications

Florida has prepared detailed specifications for developing their test items and for the construction of test forms. The forms have been standardized so that they possess uniform administration procedures, timing, and scoring patterns in order to permit comparison of scores among the school districts. Specifications also have been prepared for the field tests. These are too numerous to repeat for this report but can be found in the publication, *Operating An Objective Referenced Testing Program: Florida's Approach to Large-Scale Assessment*. This report is available through the Cooperative Accountability Project.*

Fourth Assessment

Florida is making significant changes in its assessment pattern, beginning with the 1974-75 school year, because the amended Accountability Act of 1971 requires census testing for the first time; restricts for the time being assessment of any other subject areas than reading, writing, and mathematics; and calls for the comparison of state student performance with national indicators of student performance. The fourth assessment was conducted in February, 1975, for grades 3, 6, and 9 in reading, writing, and mathematics and was contracted with the Westinghouse Learning Corporation. Each student took a three-to-four hour battery.

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* Judy L. Haynes and Crane Walker, *Operating An Objective-Referenced Testing Program: Florida's Approach to Large-Scale Assessment* (Denver: Cooperative Accountability Project, 1975).

Replication of National Assessment in Reading and Mathematics

In addition to the regular statewide assessment of all students in specified grades, Florida is complying with the amended Accountability Act by conducting an assessment matched with the National Assessment of Educational Progress so that state performance can be compared with national and southeast region results. A sample of 9-, 13-, and 17-year-olds will be tested in the subject areas of reading and mathematics.

The 13-year-olds were tested in December of 1974, the 9-year-olds in January, 1975, and the 17-year-olds in March, 1975, a schedule that parallels NAEP as closely as possible. The same test items and testing time that NAEP used were followed in the Florida assessment. Approximately 80 schools participated at each age level, and every district participated on at least one age level. Between 20 and 50 students were tested at each school in the sample.

Results will not be reported by individual student, school, or district as in the regular assessment program, but only at the state level of performance in the form of percentages of achievement of the objectives and test items. The results will be analyzed by certain demographic and socioeconomic categories, such as race, language, sex, and size and type of community.

Contracting

Florida has continued to contract with a commercial publisher each year of the assessment. The Florida Department of Education has remained responsible for supplying the first set of test items to the contractor for review and monitors all contract activities. The Department also prints reports of the results. The contractor reviews the test items and takes care of the more technical aspects and activities of the assessment program, such as preparing test formats, developing manuals for test administration, and compiling training materials. Close supervision over all activities is exercised by the Florida Department of Education staff. The staff has found that personal meetings on a periodic basis with the contracted firm are more satisfactory and speed up the process more successfully than reliance upon telephone and mail contracts.

Florida contracted with the Westinghouse Learning Corporation for the 1974-75 and 1975-76 assessments. Until now, a different commercial firm was used each year which caused problems because a major effort was required on the part of the Department of Education staff in acquainting the new contractor with the state's needs in objective-referenced testing. Florida acknowledges that it would be more practical and satisfactory to select a contractor for a three-year period, but the state's bidding laws prevent this kind of arrangement. Contracts that cost over $15,000 must go out to competitive bidding with the lowest qualified bidder winning the contract. In order to change this procedure, special authorization will have to be acquired.

Michigan Test Instruments

Norm-Referenced Tests

Michigan's legislation specifically mandated an assessment of all pupils in reading, mathematics, language arts, and/or other general subject areas of the basic skills. The results of the first assessment were demanded by a date that prevented any extensive development of tests involving much participation by Michigan educators.* Norm-referenced tests were used in the Michigan Educational Assessment Program for the first four years. The development of performance objectives and objective-referenced tests to measure them was being conducted during this period, but final versions of the test items were not ready before the 1973-74 assessment.

For the first assessment, Michigan contracted with the Educational Testing Service for test instruments that were the publisher's alternative forms of existing, standardized, norm-referenced tests in vocabulary, reading, English expression, and mathematics for grades 4 and 7. Specifications for the first assessment were written by ETS based upon Michigan school textbooks. A 12-member Ad Hoc Battery Specifications Committee, appointed by the Michigan Department of Education and composed of teachers, superintendents, administrators, research and curriculum specialists, parents, and Department of Education staff, reviewed the specifications. Department approval followed.

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* **State budget appropriations for implementing the assessment program implied the time constraints.—ED.**

Item Development Panels

The Educational Testing Service continued to develop norm-referenced tests according to specifications approved by the Michigan Department of Education for the next three assessments, but the Department was interested in bringing into the process the experience and knowledge of the state's educators in order to make the tests more appropriate for Michigan students. The Department formed six committees or Item Development Panels, one for each subject area (reading, mathematics, and English) at the fourth and seventh grade levels. Membership generally consisted of an administrator, two subject area specialists, and four classroom teachers with a strong background in the subject areas. Recommendations for panel membership were solicited from several state education associations.

The panel members participated in workshops during which test specifications were reviewed and revised with the assistance of ETS test specialists and Michigan Department of Education staff. Information was supplied about item statistics, and direction was given in the techniques of writing test items. Those written by the committee members were reviewed and revised by a test specialist at ETS, keeping in mind such considerations as the necessity for one correct answer to an item; simple language, free from ambiguities; appropriateness for the test population; and freedom from racial bias.

Pretesting

Items that could be revised acceptably were categorized according to content, and the better items were used for pretesting. The pretests were reviewed independently by two different test specialists, as well as by the editorial staff of ETS. Pretests were administered, along with the current assessment tests of basic skills, to a random sampling of pupils in the fourth and seventh grades. The results were used to prepare tests for the succeeding assessment.

Test Format

All tests were evaluated for content validity, reliability, difficulty, and speededness.* Tests for the 1969-70 assessment required 100 minutes of actual working time and 20 minutes to complete a background questionnaire. For the 1970-71 assessment, the achievement tests were lengthened to permit the reporting of reliable scores for individual pupils. The tests took 115 minutes of working time; the background and attitude questionnaire was not timed. In 1971-72, the test battery was estimated to take a combined total of 110 minutes of actual working time. The student background portions and a pretest of the 1972-73 testing took about an hour.

Attitude Tests

Attitude tests have been in and out of the Michigan assessment program. A pupil attitude test was used in the 1969-70 and 1970-71 assessments, but attitudes were not measured in the 1971-72 or 1972-73 assessments because the test did not meet Michigan standards for reliability, and the measure was withdrawn for revision. Preliminary attitude tests had been tried out earlier in the 1971-72 assessment by more than 2,500 fourth and seventh grade pupils in three school districts. From this tryout, two attitude measures were chosen (attitude toward school and self-concept) as attitudes that could be well-measured. These measures were given on a voluntary basis to grades 4 and 7 in the assessments conducted in the fall of 1973 and the fall of 1974; however, they were omitted in 1975-76 in a search for a more valid instrument.

Objective-Referenced Tests

The decision to make the fundamental change to objective-referenced tests was made in 1971 when the Michigan State Board of Education and the State Superintendent of Public Instruction directed the staff to develop the assessment tests along with the establishment of performance objectives in the basic skills areas. It was believed that testing students on objective-referenced items based upon specific, minimal performance objectives prepared by Michigan educators and citizens would be a better way to determine an individual pupil's knowledge, and the results would be more useful to local educators for planning remedial assistance programs. In addition, the 1969 Michigan Act No. 307, which required the development of a state assessment plan, said that the plan should include "procedures for the objective measurement of instructional outcomes" among the students.

*** Michigan explains this term by stating that a test is judged to be unspeeded if nearly all the students get three-quarters of the way through the test and 80 per cent of them reach the last question. (See *Technical Report*, March, 1974, p. 17.) —ED.**

Local School District Contracts for Test Development

A model was devised in 1971 for developing objective-referenced tests in which contracts were awarded by competitive bidding to a commercial firm (CTB/McGraw-Hill) and to several local school districts. The school districts provided groups of teachers, subject area specialists, and administrators who received from the commercial test publisher special training in developing reading and mathematics test items. A four-day training session was held for the test writers of the several districts. Item writing during the training session was supervised and monitored by Michigan Department of Education curriculum specialists, assessment program staff, and representatives of the commercial publisher. The items were multiple choice items. Special attention was paid to keeping the vocabulary level at least one grade level below that for which the items were written and to eliminating confusing wording or illustrations, intricate test items, and ambiguities. After two months, the groups of educators had written approximately 2,000 test items.

Pretesting

Preliminary item reviews were conducted by Michigan Department of Education staff, selected item writers, and local school district project directors. The items then were reviewed by McGraw-Hill for clarity, appropriateness, vocabulary level, and correct measurement of the objective. The five best items for each objective were edited and arranged in a format for pretesting.

The pretesting was conducted in the school districts under contract for test development and in the Detroit Public Schools, grades 3, 4, 6, and 7. Terminal grade 3 objectives were measured by grades 3 and 4; terminal grade 6 objectives by grades 6 and 7. Meetings were held beforehand with the teachers involved to discuss the purpose of the pretest.

Following the pretest, teachers' opinions were sought concerning the tests. Their comments were submitted to panels of reading and mathematics specialists for further reaction. The performance objectives and tests were reviewed item by item by the subject area specialists, and their recommendations were considered when the final items were revised for use in the 1973-74 assessment which aimed to measure minimal skills objectives desirable for all students to attain. The test development process, including the pilot test and up to the final version of the test, took approximately nine months to complete.

The development of a new first grade objective-referenced instrument was begun in 1973. Educators in four local school districts wrote the test items under the direction of the Michigan Department of Education staff. They were reviewed and edited by the American Institute for Research in Palo Alto and then tried out in the four local school districts. Following reviews and revisions by panels of teachers and specialists, the final instrument was prepared by the contractor according to specifications approved by the Michigan Department of Education for pilot use in the 1974-75 assessment program.

1973-74 Assessment

Measurement Research Center and Westinghouse Learning Corporation assisted the Michigan Department of Education with the 1973-74 assessment in which the objective-referenced tests were used for the first time. The grade 4 tests measured 23 performance objectives in reading and 35 performance objectives in mathematics. Grade 7 tests measured 23 reading and 45 mathematics performance objectives. There were five test items for each objective in each of the tests for both grades. All the pupils in grades 4 and 7 took the tests. The reading and mathematics tests were not timed. The word relationships tests, also administered in this assessment, was timed, but generally the students could complete the three tests in two to four hours. The attitude test was offered on an optional basis.

Beginning with the 1973-74 objective-referenced testing, the Michigan assessment has been administered in September-October rather than in January of each year. It was decided to collect information from the assessment in the fall of the year so that teachers in the local districts could receive the results early enough to provide remedial assistance to students requiring it.

1974-75 Assessment

The Measurement Research Center was the firm chosen to handle printing and scoring for the 1974-75 assessment. Based on the results of the 1973-74 assessment, subject matter specialists deleted some of the grade 4 and 7 objectives and test items used in that assessment and clarified others by word changes or improvements in the illustrations.

Testing of all pupils in grades 4 and 7 on a core of minimal performance objectives in reading and mathematics was conducted again in the 1974-75 assessment program, but a slightly fewer number of objectives were measured this year than in the previous year. Thirty objectives were measured for grade 4 mathematics; 19 objectives for fourth grade reading. For grade 7, there were 40 objectives measured in mathematics and 20 objectives in reading. As in 1973-74, five test items measured each objective in each test for both grades. The tests were not timed, but in 1974-75 both the word relationships test and the attitude test were offered on an optional basis.

Some special features were introduced in the 1974-75 Michigan assessment. New, experimental objective-referenced items in science and mathematics were administered to the fourth and seventh grades on a school sampling basis. All of the students in the designated schools received the extra questions. Thirty minutes of additional time were needed to complete the tests with the experimental items. The purpose of the tryout was to gather essential data on the psychometric properties of the test items and to select items for future testing. Data for reporting statewide and individual pupil results on the attainment of the objectives were not gathered.

The new test items were written as part of a cooperative project between the Michigan Department of Education and nearly 30 local school districts. The districts are aiding the Department of Education in building a file of test items for further use both in the state assessment program and in the local needs assessment programs.

Another special feature of the 1974-75 assessment was the first grade pilot assessment. A sampling of Michigan schools which enrolled first grade pupils was assessed with the revised pretests used in the 1973-74 assessment to measure the cognitive, affective, and psychomotor domains. Forty-four separate tests measured 48 of the pre-primary objectives approved by the Michigan State Board of Education. No teacher gave more than one test covering no more than two objectives because of the additional time needed to administer the test to pupils of this young age. Some tests were administered to small groups and some were individually administered. The tests were not timed, and a single test administration of any small group could be completed within 20 minutes. A single test administration of any individually administered test could be finished in five minutes.

Test results provided reliable data for improving the test items and assessment procedures for later use; for determining educational needs as reflected by the pre-primary objectives; and for revising the objectives.

1975-76 Assessment

The core testing of every pupil in grades 4 and 7 in reading and mathematics was repeated in the 1975-76 assessment with the same number of minimal performance objectives that were tested in the previous year. Experimental test items again were tried out in grades 4 and 7 on a school sampling basis in reading, mathematics, and in a third subject area, health. Results are to be collected at the state level and will be used for the selection of items for future assessment tests.

The first grade pilot assessment again was administered in a statewide sampling of schools under the same procedures as in 1974-75 except that 32 objectives, instead of 48, were measured in 1975-76.

Tenth Grade Pilot Assessment

A new feature of the Michigan Assessment Program in 1975-76 is the grade 10 pilot assessment. The test items were written by teachers and specialists provided by four Michigan school districts. Following a review and selection process, the technical support contractor assembled the items in booklets which then were tried out in the same four local districts in the spring of 1975. The contractor processed the resulting data and prepared the test booklets which were used on a pilot basis in the 1975-76 assessment program.

A group of 30 volunteer high schools were stratified according to the size of their tenth grade enrollments and district achievement level (depending on the seventh grade attainment results of the 1974-75 reading assessment). All tenth grade students in the 30 volunteer high schools participated. Approximately 100 objectives were divided into four tests consisting of multiple choice test items. No more than 210 minutes were needed by a student to complete the test.

The tenth grade assessment is the first to be administered at the high school level in the Michigan Educational Assessment Program. The program will focus on informing the school staff about the assessment program, trying out test administration procedures, and explaining the uses of objective-referenced testing results.

Tentative Plans for the Future Development of Objective-Referenced Test Items[10]

Although future plans for developing test items in Michigan still are in the discussion stage and do not have final approval from the State Board of Education at this time, a systematic plan is being devised. Beginning with the use of objective-referenced tests in 1973-74, the assessment items have been written entirely by Michigan educators. In order to avoid limiting the scope of the items, Michigan is considering a plan for collecting a large, usable pool of items from several sources, as well as those written by Michigan educators. Other sources would be educators of other states, National Assessment of Educational Progress, commercial publishers, and independent writers.

Item reviewers, the majority of whom are to be Michigan educators, will be sought from all major geographic regions of the state and will represent large minority groups within the state and areas of varying population concentration. Particular attention will be paid to reviewers who have worked with low achieving students. The Michigan Department of Education staff, in cooperation with teams composed of two or three subject matter specialists and a measurement specialist, will review each item according to several criteria and eliminate those items which cannot be corrected satisfactorily.

Following this initial review of the test items, the items will be tried out in a small group of students to obtain their individual reactions. There can be more than one of these informal tryouts, ranging from a small group of pupils to several classes of students. More formal tryouts can take place by adding experimental test items to the regular assessment instruments. Those items that prove to be difficult or are negatively biased in the formal tryout will be reviewed a second time for revision or elimination. This system of tryouts and review procedures is expected to yield a final pool of usable items from which a selection of test items can be made for any given assessment.

Most of Michigan's test items have been multiple choice, but the item writers will be encourage to devise free response, open-ended types of items as well, or whatever kinds of items appear to be most appropriate for measuring a particular objective.

Michigan expects to expand its assessment program staff and feels that the tryouts could be handled directly by the staff, although the use of a contracted firm or both the staff and a firm is likely for the present.

The principal steps taken by the three states in the development of their test instruments are briefly summarized in Table 9.

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[10] *The Long Range Plan for the Michigan Educational Assessment Program* (Lansing: Department of Education, 1974) pp. 15-24.

Table 9

Current Methods Used by Connecticut, Florida, and Michigan for the Development of Test Instruments

Connecticut	Florida	Michigan
Some NAEP test exercises are used, but the majority of Connecticut's test items will be selected from commercial sources by Connecticut teachers and reading specialists in the future Commercial firm conducts a pretest of the items	Initial items are supplied by the state university and several local districts under contract to the DOE Test items selected according to test specifications standardized for uniformity to permit comparison of scores among school districts Commercial firm reviews and revises items Pretest conducted to test reliability of instruments Validation of test items takes place following assessment; invalid test items not reported in results Some NAEP items used in replication of NAEP assessment for a sample of 9-, 13-, and 17-year-olds during 1974-75, apart from the regular assessment	Initial test items prepared by teachers, subject area specialists, and administrators of several local school districts under contract to DOE Training sessions held by commercial firm and DOE Preliminary item reviews conducted by DOE staff, selected item writers, and local district project directors Items reviewed by commercial firm Tryouts conducted in districts under contract to write items Teachers' opinions sought concerning the items tried out in these districts Subject area specialists review teachers' comments and the items for preparation of final items Proposed future plans consist of a large pool of items from in-state and out-of-state sources. Reviews will be performed first by Michigan educators representing major geographic areas, minority groups, low achievers, then by DOE staff, subject matter specialists, and a measurement specialist according to set criteria. Final items will be selected from informal and formal tryouts.

Use of Related Data and Variables by Connecticut, Florida, and Michigan

The kinds of related data and variables a state plans to collect in an assessment program depend upon decisions made about the type of information wanted from the assessment and how the results should be reported. Reporting results by categories of age and/or grade level and sex is the most common practice. Connecticut reported by age level in the state's first assessment in order to synchronize their assessment with the National Assessment of Educational Progress age levels (9, 13, and 17) and to compare state results with national and the northeast regional results. For the first two years of the Florida assessment, objectives were adopted for age levels 8, 11, and 14, and age in this case was used to define the pupils to be tested in the sample. Problems arose because it was too difficult for the schools to identify their students by age for testing due to the structure of their student information systems. Therefore, Florida discontinued the use of the age level category and defined the testing population by the corresponding grades of 3, 6, and 9; objectives have been prepared for grade levels since 1973-74. In non-graded schools, the pupils to be tested are identified by the number of years in school. A recent exception to this policy was the NAEP-type assessment performed in Florida in 1974-75 (apart from the regular assessment program) which assessed age levels commensurate with those assessed by NAEP to enable a comparison between state performance and national and regional performance. Connecticut and Florida report results by sex; Michigan does not.

Data on socioeconomic status and demographic data have been gathered by the three states with varied degrees of emphasis. Connecticut reports results by community size (big cities, fringe cities, medium and smaller cities), again commensurate with the National Assessment of Educational Progress, and plans to collect considerable socioeconomic data and school resources information in future assessments if the funds are available to do so. Connecticut hopes to develop a prediction instrument to show the level of student performance that may be expected.

Florida uses its data for special analyses to verify the representativeness of the sample and to provide information for particular research reports. Florida is beginning to predict local school district scores and, after the 1974-75 testing, school scores will be predicted. Considerable demographic and socioeconomic data also will be collected in Florida's NAEP-replicated assessment which will be used in reporting the results of the assessment.

From the beginning, Michigan's assessment has been tied to the premise that student background characteristics, the qualities of the instructional staff, and the amount of financial resources spent by a district have relationships to achievement levels. Michigan used a student background questionnaire for the first two years of the state's assessment program; it asked for biographical information, economic status, and the educational attainment of the parents, but the questionnaire was discontinued because it became a controversial issue. Later, data for socioeconomic status was estimated from information given on a questionnaire filled in by the school principal, but this method was considered inadequate and was stopped. Michigan has continued to gather data on approximately 15 measures concerned with the instructional staff, district financial resources, per cent of racial-ethnic minority students, school dropout rate, and the size of grade levels assessed, all of which are obtained from Department of Education records.

The Michigan Department of Education provides norm tables for local school officials to use in interpreting the human and financial resources information reported in school and school district summaries. In the 1974-75 assessment, the variables are variously reported at the state, district, and school levels. An optional magnetic tape reporting method also is provided to researchers who want to investigate the relationships between the assessment results and other educational variables.

Tables 10, 11, and 12 give the most current variables gathered by the Connecticut, Florida, and Michigan, their source, and the use of the data.

Table 10

Related Data and Variables Collected by Connecticut*

Data Collected	Obtained From	Use
Occupational and educational levels of parents Values, goals, and interests of students Teacher age, level of training, experience, salary Teacher attitude toward jobs; recognition of merit Pupil/staff ratio; per-pupil costs; types of special services; special education data; number of library books; financial resources of community; use of educational media; pupil population Student dropout rate; number of curriculum options; vocational preparation and follow-up Teaching methods; curriculum and teaching innovations	Some information currently available, but most would be collected through new procedures	To make studies of the relationship of the condition variables to pupil performance in terms of the goals and how this information can be used in anticipating pupil performance To develop a prediction instrument which will show the level of performance that may be expected

*These are Connecticut's anticipated plans for the future if funds are available. In previous assessments Connecticut collected age, sex, and demographic data on size of community (big cities, fringe cities, medium cities, smaller cities) in order to report and compare results by size of community, by state, by northeast region, and by national results as reported by the National Assessment of Educational Progress.

Table 11

Related Data and Variables Collected by Florida

Data Collected	Obtained From	Use
Date of birth Sex Race Whether student understands spoken English Whether student is a special education pupil Whether student is a migrant student Native language of student who does not understand English	Test administrator in space provided on test booklet cover	For special analyses to verify representativeness of sample For special research reports, such as reports of results by categories of sex, race, socioeducational status To predict scores of district and, following 1974-75 assessment, to predict scores of schools

Table 12

Related Data and Variables Collected by Michigan

Data Collected	Obtained From	Use
Human Resources:	Department of Education records	Reported in school and school district summaries; norm tables provided to local school officials for interpretation To provide optional reporting method to researchers for investigating relationships between assessment results and other educational variables
Professional instructional staff per 1,000 pupils		
Teachers per 1,000 pupils		
Average years teaching experience		
Percentage of teachers with Master's degree and above		
Average contracted salary per teacher		
(Above collected at state, district, and school levels)		
District Financial Resources:		
State equalized valuation per resident member		
Local revenue per pupil		
State school aid per pupil		
K-12 instructional expense per pupil		
Elementary instructional expense per pupil		
Total current operating expense per pupil		
Total operation millage		
(Above collected at state and district level)		
Other:		
Percentage of racial-ethnic minority students (school, district, and state level		
School dropout rate (state and district levels)		
Grade level membership (state, district, and school levels)		

Which Pupils Are Tested and Sampling and/or Census Testing Methods

Probability random sampling is the procedure used by Connecticut to select the age groups participating in the assessment program. The selection takes place in four categories: by community size, by school district, by schools in each district, and by pupils within each school.

The first three assessments in Florida, beginning with the 1971-72 program, followed the multiple matrix sampling method to assess pupils in specified grade levels. When the 1974 Florida General Assembly amended the Educational Accountability Act of 1971, this practice was changed. Beginning with the 1974-75 assessment, all students in specified grades have been tested so that Florida educators can receive reports of the results for individual students and for each school, as well as on a local district and state level basis. Florida's NAEP-related assessment, also conducted in 1974-75, resulted in a two-part assessment program that year and, in this particular program, sampling of the specified ages was similar to National Assessment of Educational Progress (NAEP) procedures.

The Michigan assessment presently is evolving into a two-part program: all pupils in grades 4 and 7 are tested as usual on a core of important minimal objectives, and a statewide matrix sampling method is operated simultaneously for other objectives in the tryout and pilot portions of the program. Sampling procedures, precipitated by the change-over from norm-referenced testing to objective-referenced testing, were introduced for the first time in the 1974-75 and 1975-76 assessment programs.

Sampling in Michigan was performed at the school level only in 1974-75 and in 1975-76. A list of schools was drawn up which contained the grades desired for the sampling process, and the necessary number of units was randomly selected from the list. No further sampling was done at the classroom or student levels. All the students in the desired grades of the schools selected in the sample took the tests. This method was used for the experimental items tested in grades 4 and 7 and for the first grade pilot assessment both years. The tenth grade pilot assessment in 1975-76 involved all tenth grade students in 30 schools which volunteered to participate.

The Michigan Department of Education staff is planning a new spiral sampling procedure for assessments in the future which will result in a statewide sampling of students.

Table 13 notes the number of pupils tested; those included and exempted from the assessment program; and the sampling methods used by Connecticut, Florida, and Michigan in recent years to select students for testing.

Table 13

Pupils Tested and Sampling and/or Census Testing

State	Pupils Tested	Sampling and/or Census Testing
Connecticut		
Number tested	1971-72—7,751 .February, 1975—4,500 Fall, 1975-4,000 plus any other local schools who plan to participate	A systematic, 4-stage probability random sampling selection was made: first stage by community size (big cities, fringe cities, medium cities, smaller cities) ; second stage by school district; third stage a selection of 3 schools in each selected district, one for each grade level; and fourth stage a selection of specific pupils taken at random within each school. The required number of eligible pupils in any school was 48, but the final number was set at 60 to allow for absences.
Age/Grade	9-, 13-, and 17-year-olds in 1971-72 and February, 1975; grade 8 only in fall of 1975	
Pupils included	All of the given ages in public and vocational-technical schools, plus those who have dropped behind one grade level or are in a grade ahead; nonpublic schools included in 1975 at their request	
Pupils exempted	Dropouts; educationally mentally retarded; emotionally disturbed; and non-English speaking pupils	
Florida		
Number tested	1973-74—112,000 1974-75—400,000	Up through 1973-74, multiple matrix sampling was used in Florida. Only a portion of the pupils in a school were tested, and no pupil took all the items on the test. The items were placed on three test forms per grade, and each student completed only one of the forms. The sampling was designed to be representative at the state and district levels. Beginning in 1974-75, census testing has been mandated by law in Florida for grades 3 and 6. In 1975-76, all pupils in grades 3 through 6 will be tested.
Age/Grade	Grades 3, 6 and 9 both years	
Pupils included	All of the given grades plus non-English speaking and migrant pupils	
Pupils exempted	Educable mentally retarded; trainable mentally retarded; blind; deaf; also exempted on an individual basis are exceptional pupils (with physical or emotional problems) whom the school coordinator and principal agree should not be tested	

Table 13 (continued)
Pupils Tested and Sampling and/or Census Testing

State	Pupils Tested	Sampling and/or Census Testing
Michigan		
Number tested	1973-74—318,000 1974-75—406,000 (there were approximately 320,000 4th and 7th graders, 16,000 nonpublic 7th graders, and 70,000 1st graders)	Census testing used in the core assessment of grades 4 and 7; sampling procedures, applied at the school level, used in the 1974-75 and 1975-76 assessments for experimental items tried out in grades 4 and 7 and for the first grade assessment
Age/Grade Level	1973-74—Grades 4 and 7 1974-75—Grades 1, 4, and 7	
Pupils included	Pupils in specified grade levels, plus those receiving itinerant services (hard of hearing, physically handicapped, educable mentally retarded, emotionally disturbed, those with speech impediments)	Necessary number of units was randomly selected from a list of schools which contained the specified grades; no further sampling done at the classroom or student levels; all students in the specified grades of the school sample took the tests
	Pupils in non-graded programs who can be identified as 4th and 7th graders; those whose grade level cannot be determined to be included if they are in their 4th or 7th year past kindergarten	Department of Education staff planning a new spiral sampling procedure for future assessments which will result in a statewide sampling of students
	Those who attend public schools on a shared time basis from nonpublic schools provided they are getting instruction in reading and mathematics in the public schools	
	Nonpublic first grade students included at the option of the local district	
Pupils exempted	Confirmed Type A mentally handicapped unless they participate in regular classroom programs and can be tested without physical or mental strain; those who receive instruction only in special classes excluded at the option of the local district	

Test Administration Procedures

Introduction

Test administration demands a considerable amount of preliminary work and careful planning on the part of the contractor and the state education agency before the tests are handed out to the students and testing for the assessment program actually begins. People have to be appointed to take charge of every administrative detail linked in a chain from the contractor and the department of education down through the districts, to the schools, and to the classroom where the tests are given. The process is reversed with the return of the tests and materials from the particular school back to the district and ultimately to the state education agency, the contractor, or to a scoring firm for processing.

Depending upon the number of students to be tested, the process can engage a substantial group of persons to make the local arrangements with the local districts and schools and to administer the tests, as in the case of Florida and Michigan, or a smaller team of persons hired and trained by the contractor, as in the case of Connecticut. Connecticut tested 7,751 students in their first assessment and 4,500 in the second assessment. Florida tested 112,000 the 1973-74 school year and expects to test 400,000 in 1975 to comply with the state law which now mandates the testing of all students in selected grades. Michigan tested over 300,000 students a year in the earlier assessments and over 400,000 in 1974-75.

The details of the test administration procedures followed by Connecticut, Florida, and Michigan are described next.

Connecticut Procedures

The commercial firm contracted by Connecticut to handle the reading assessment in 1971-72 was responsible for test administration. The Institute for the Study of Inquiring Systems (ISIS) first hired ten field administrators and a supervisor following personal interviews with teachers, principals, and substitute teachers in the state who were recommended by local district superintendents and other educators.

Two training sessions, monitored by Department of Education staff, were held by ISIS for the administrators and the supervisor. In the first session the participants were given an overview of the program and instruction in the important preliminary work to be done prior to actual testing, such as directing a planning session with the school personnel involved, scheduling of the tests, and how to select the testing facility. The second session held a month later provided training in the actual administration of the tests, the coding of the test booklets, and the preparation of coding transfer forms.

In order to secure maximum cooperation and understanding from the schools in the sample, several contacts were made by mail and telephone before the first meetings were held with the school officials. Six weeks before the field administrators' first visits to the schools, a letter was sent to all superintendents of the schools selected for the sample. The letter explained the assessment program and its relation to the National Assessment of Educational Progress (NAEP), asked for cooperation, and named the schools in the superintendents' districts that were to take part. Following this mailing, a similar mailing was sent to the principals of the schools in the sample, along with detailed explanations and instructions regarding the assessment process. The instructions suggested that the assessment would need a program coordinator who could be the principal or someone appointed by the principal.

A telephone call was made to each school principal by the Connecticut field supervisor to schedule appointments between the administrators and the principals. At these meetings the details of the assessment program and the procedures to be followed by each school were discussed. The administrators explained the method of selecting students in the sample to the school principal and his coordinator since it was their responsibility to obtain the correct number of students needed to take the test. The field administrators also were responsible for arranging the dates and times for the assessment to take place in the schools. The administrators kept in close telephone contact weekly with the field supervisor to discuss their programs and the problems that arose.

During the testing process, the administrators distributed the test materials to the students and read an introductory statement to them, but all test instructions were taped for the students. When the assessment was completed, the administrators filled out transfer forms used for recording the necessary data for keypunching responses which ultimately were to be computerized. A check was made by the contractor on the test administrators' accuracy in filling out the forms.

Connecticut contracted with Research Triangle Institute for the February, 1975, science assessment. The procedures for administering the tests were very similar to those for the reading assessment, and they were monitored, both during the training sessions and at the site of testing, by Connecticut Department of Education staff. Westinghouse Learning Corporation handled the test administration procedures for the second reading assessment in the fall of 1975, and in general, the same procedures were followed.

Florida Procedures

Administration of the assessment tests in Florida, which depends largely upon local district and school personnel to make local arrangements and carry out the actual testing procedures, is the responsibility of the Student Assessment Section of the Florida Department of Education.

A district coordinator, selected by the district superintendent for each of the 67 school districts in the state, is responsible for conducting the testing in his or her district. These duties entail the mailing of information and materials to the school coordinator and test administrators, training the school coordinators, monitoring all steps related to the assessment, and returning all assessment materials to the Florida Department of Education. Results of the assessment also are disseminated by the district coordinator. In general, the same persons have been acting as district coordinators each year of Florida's assessment, providing continuity to the program.

Each school has a school coordinator in direct charge of testing at the school. Test administrators, who usually are counselors or teachers appointed by the school principal, help the school coordinator in this task.

Training sessions for the district coordinators are led by the Florida Department of Education staff with one person from the contractor's staff present to provide technical explanations. Florida found that it is more successful to have Department of Education staff members lead the training sessions than the contractor's staff because of the Department's familiarity with the needs and problems of the local districts. Several training sessions are held in different regions of the state so that the district coordinators can attend the session closest to home. The district coordinators receive the information they need to instruct the school coordinators and test administrators from the district coordinator training sessions.

Following the training sessions, the district coordinators train the school coordinators. The test administrators are trained either by the district coordinators or the school coordinators. Portions of the tests are given verbally by the test administrator, but most of the contents of the tests and the instructions are read by the student.

Training materials are provided by the contractor, including manuals for the district coordinators, the school coordinators, and the test administrators, as well as transparencies and a filmstrip. These materials are sent to the district coordinators two weeks in advance of the training sessions. The contractor also takes care of the packaging and mailing of the assessment tests and materials.

An evaluation is performed by the contractor of the effectiveness of the training sessions and materials through the use of questionnaires and interviews. The contractor summarizes the times when specific directions are not followed correctly as part of the evaluation. District coordinators meet twice annuallly; first, to draw conclusions and make recommendations about the methods and materials used and again, to review the results.

Michigan Procedures

Michigan, too, depends upon local district officials to make local arrangements and to administer the tests for the assessment program. Michigan uses a system of coordinators similar to that of Florida. A local district coordinator is designated for each K-12 district by the superintendent of the district. An intermediate district coordinator for each intermediate district is appointed by the intermediate district superintendent. A school coordinator is appointed for each school in the district by each local district and intermediate district coordinator. Assessment administrators are selected by local school officials.

The local district and intermediate district coordinators distribute to the schools the materials they receive from the contractor; train the assessment administrators; collect the test booklets and answer sheets; destroy unused or extra materials; return the test answer sheets and related materials to the Michigan Educational Assessment Program Scoring Service; and answer questions that might arise about the program and materials.

The school coordinators send the assessment materials they receive from the district coordinators to the appropriate assessment administrators. The school coordinators also arrange meetings with the assessment administrators and teachers to explain the program and to show them filmstrips about the program that are provided by the Michigan Department of Education. After the tests are administered, the school coordinators return all the materials, used and unused, to the local district or intermediate district coordinators according to explicit instructions given in a manual. The manual contains detailed, step-by-step instructions to help ensure uniform, statewide administration of the tests.

The assessment administrator can be a classroom teacher or counselor, or the school principal if large groups of students are taking the tests. Proctors can be assigned to assist the assessment administrators when more than 30 students are being tested. Assessment administrators monitor the students when they are taking the tests to record adverse physical conditions, inappropriate group reactions to the tests, and individual situations such as illness and unfair assistance. Such information is not returned to the Michigan Department of Education or to the Michigan Educational Assessment Program Scoring Service, but is retained by those in the schools and districts who will be interpreting the results.

The administration of the test battery is monitored by Michigan Department of Education staff in a sampling of the school districts in order to see that a uniform administration of the tests is maintained statewide.

Table 14 indicates the major elements of the test administration procedures followed by the three states.

Table 14

Major Elements of Test Administration Procedures

Procedures	Connecticut	Florida	Michigan
Principal responsibility for test administration:	Contractor	Local districts	Local districts
Personnel involved:	10 field administrators & 1 supervisor interviewed and hired by contractor from list supplied by local district superintendents	District coordinators appointed for each district by the district superintendent School coordinator for each school appointed by school principals Test administrators appointed by school principals	District coordinators appointed for each district by the district superintendents School coordinators appointed by local district coordinators Test administrators (usually teachers) appointed by local school officals
Training:	Supplied by contractor	DOE trains district coordinators with contractor present to cover technicalities School coordinators trained by district coordinators Test administrators trained by district coordinators or school coordinators Manuals supplied with instructions	Supplied by DOE for district coordinators School coordinators trained by district coordinators Test administrators trained by district or school coordinators Manuals provided district and school coordinators and test administrators with detailed instructions
Monitoring or evaluation of procedures and materials:	Performed by DOE staff and contractor	Performed by contractor and district coordinators	Performed by DOE staff in sample of school districts; school test administrator monitors students for adverse testing conditions and reactions to be reflected in interpreting results

Results

Introduction

Probably the two most important aspects of a state assessment program are (1) interpretation and transmittal of the results of the program in an understandable form to the diverse audiences for whom the findings are intended, and (2) commitment to see that constructive use is made of the information. Dissemination alone is a difficult task. Full utilization of the results may not be immediate because it takes time, in terms of years, to collect enough information to be of constructive use. But utilization is the foremost and ultimate purpose of an assessment and accountability program. Without proper dissemination of the results, utilization may not be satisfactorily accomplished. Many of the problems and misunderstandings that arise in assessment and accountability programs are the result of lack of communication.

Ideally, understanding of the program should be promoted vigorously ahead of time, and the results of the program should be interpreted in understandable language for the several different audiences that most states include in their reporting efforts. As Frank B. Womer states in *Developing a Large Scale Assessment Program,*[11] one cannot assume that interpretation of the results will take place, nor can one assume that the results will be used automatically. An assessment program is a waste of effort and funds if it falls into nonuse. It is necessary to use various methods, in addition to the written reports of the results, to be certain the results are communicated to the pertinent recipients and that something is done about the findings.

All the states across the country which are conducting state assessment programs have printed and distributed reports which generally contain the background and objectives of the assessment program, the procedures followed to operate it, and an explanation of the tables of statistics displayed. Sometimes both a technical report and a more simplified report are prepared, the latter appropriate for public audiences.

Most states depend upon a contracted firm to score and process the assessment results and to analyze and print them. Some states, like Florida, have their results analyzed and interpreted by consultants with involvement of department of education and district subject area specialists.

Michigan prepares explanatory materials to accompany the printed reports so that teachers and administrators can analyze results in terms of their own goals and objectives. Regional workshops are held to provide information to the local school personnel, and color filmstrips containing information for interpreting results are distributed to the local districts.

Michigan also is incorporating some other systematic approaches with their dissemination activities. A dissemination model has been prepared by the Michigan Department of Education for the Cooperative Accountability Project which both state and local agencies can draw upon for guidance.[12] A full and active dissemination program that goes beyond printed reports requires considerable human and financial resources, but a state can begin with printed reports and releases to the news media, with attention to clarifying the results for the local media, and work into other approaches when resources become available.

The audiences selected to receive reports of the results are determined by state board and department of education officals, or state legislatures, and even by public pressure. Connecticut, Florida, and Michigan were given some directives in their legislative acts concerning which audiences should be included in the transmittal of results, although none of these states is restricted in this sense. The Connecticut law calls for a detailed report to be submitted to the Governor and Connecticut General Assembly in which recommendations by the State Board of Education for improving education can be included.

Florida's law specifies that the Commissioner of Education is to make an annual public report of the assessment results for each school district and for the state. Each district's school board is to make an annual public report of the results for each school in the district and must file a copy of the report with the State Commissioner of Education. Finally, an interpretation of assessment results is to be reported in each school's annual report of school progress which is sent to the parents of all children in the school.

Michigan's statute simply states that public release of information about the progress of the state system of education is required.

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[11] Frank B. Womer, *Developing a Large Scale Assessment Program* (Denver: Cooperative Accoutability Project, 1973), pp. 80, 84.

[12] *A Dissemination System for State Accountability Programs* (Denver: Cooperative Accountability Project, June, 1973).

How Connecticut, Florida, and Michigan handle the reporting, dissemination, and utilization of their results is described next.

Connecticut Results

Scoring and Processing of Results

Scoring and processing of assessment results in Connecticut are contracted to a commercial firm.

Reporting Categories

The assessment results show state, national, and northeast regional median scores (percentage correct) for each objective in each age group, by sex and by size of community (large cities, fringe cities, medium cities, and smaller towns). Tables and bar graphs illustrate the results.

Interpretation of Results

No interpretation of results at the district, school, or classroom level is possible because no identification of student, school, or community is made through the data collected.

Dissemination of Results

A technical report is prepared by the contracted firm primarily for use in the Connecticut Department of Education. A copy is sent to the state library, some college libraries, and to the ERIC Processing and Reference Facility.

A public report is prepared in a more simplified form and distributed to the Connecticut Department of Education staff, the State Board of Education, Governor, Connecticut General Assembly, school districts and schools, teacher organizations, school libraries, parents, school patrons and citizens, other states, the press, ERIC, and the U.S. Office of Education.

Another kind of report is prepared annually for the Governor and the Connecticut General Assembly in response to the *Connecticut General Statutes* which request an evaluation of all of the educational programs mandated by the General Assembly, including the assessment program. The objectives of each program, its expenditures, and the need for the program is reported along with recommendations, if any.

Utilization of Results

Results are used to establish priorities of needs for the purpose of appropriating state and federal funds to meet the identified needs and to determine program effectiveness.

The reading assessment report is supplying base data that affect program decisions for reading both at the state and local levels.

Florida Results

Scoring and Processing of Results

Scoring is completed by the contracted firm. The Department of Education analyzes the computer tapes supplied by the contracted firm, interprets the results, and prepares printed reports. The contractor supplies a final report which contains item analyses, a review of procedures to identify needed changes, and the results of supplementary studies. Census testing began in Florida during the 1974-75 school year, and the contracted firm now prints individual student reports in order to return the results to the schools more quickly. The Department of Education still processes all other reports.

Reporting Categories

Prior to the 1973-74 assessment, results were reported in terms of percentages of students who achieved each objective at the district and state levels only. In 1973-74, enough students were tested so that reporting could take place at the school level for a portion of the districts. Achievement of the objective was based upon a criterion established for each objective by a task force assigned to each subject area. The criterion was the minimum number of items that a student had to answer correctly in order to attain the objective; i.e., four out of five, five out of seven, etc. The criteria varied for each objective.

In 1974-75, all students were tested and results were reported in terms of percentages of achievement of items rather than objectives at the student, school, district, and state levels. The school reports are organized by objective and contain the percentage of achievement on every item for the school, the district, and the state. A district percentage report reveals how every school in the district performed on each item.

Florida also prepares an individual student report for each student showing how many of the items for each objective were answered correctly. It is expected that a normative score will be prepared in the future for the total test and for each subject area so that a student's achievement can be compared with other students in the state.

Florida legislators have been asking for a single score so that they can determine the relative effectiveness of a school or district educational program. In order to comply with this demand, Department of Education staff have developed regression formulas so that the total score on the entire test and on each subject area can be compared with a predicted score for the school or district based upon non-school variables.

Results for Florida's replication of the National Assessment of Educational Progress in reading and mathematics will be reported in the form of percentages of achievement on the items used to assess the objectives. State percentages will be compared to the nation and the southeast region. Results also will be analyzed by categories such as race, language, and sex.

Interpretation of Results

Statewide results have been analyzed and interpreted by Florida Department of Education consultants and by subject area experts under special contract. Recommendations for improvement are suggested where needed. Districts and schools are responsible for the analysis of their results.

Dissemination of Results

A series of written reports, including several technical reports and a summary report, are sent to the local districts and schools, state legislators, the news media, and other states (upon request).

News releases are prepared by Florida Department of Education staff, and testimony is provided to legislative education committees upon request. Each local district is responsible for distributing the assessment results locally and to local media, usually through the district coordinator who has direct contacts with parents, school staff, and other citizens of the district.

The results of the replicated National Assessment of Educational Progress will be distributed to the school districts and to the Florida House and Senate Education committees.

Utilization of Results

Comparisons can be made between school and district results or between district and state results. Caution must be exercised in this process by considering the variables that could affect the scores, unless the groups that are chosen for comparison have similar characteristics.

Schools and districts can determine how much progress they are making toward their stated goals and objectives, based upon their local problems and needs, so that effectiveness and improvement can be monitored.

The present/previous summary included with the district reports can be used by the districts to chart trends and to develop new goals which reflect the needs of the student.

The district percentage summary included in the school reports can be analyzed by educational personnel at the district level for patterns of school performance. Schools with consistently high scores in a particular subject area can be identified so that their programs can be reviewed for possible use by other schools with low scores.

Michigan Results

Scoring and Processing of Results

Scoring and processing of the Michigan assessment results is accomplished by the contracted firm.

Reporting Categories Prior to 1973-74

Before objective-referenced testing began in 1973-74, reports were prepared for the local districts based upon the results of norm-referenced testing of each pupil's basic skills portion of the assessment battery, excluding the first year of assessment. These results were reported in terms of the pupil's standing in relation to other pupils who took the tests. Pupils' scores, norm tables, and technical information were provided so that the local schools could determine how well each pupil was performing.

Reports also were prepared for the local districts based upon the school and district results of all measures used in the assessment. These included district and school scores, norm tables, and explanatory materials so that the local districts could analyze their own results.

A district-by-district summary identified the relative standing of each school district through the use of standard scores and percentile rankings.

Public reporting of the results entailed reports for groups of districts, school, and pupils, with scores presented in percentile form.

Reporting Categories 1973-74

For the 1973-74 assessment, results of the objective-referenced testing in mathematics and reading were reported on an individual, student, classroom, school building, school district, and state-level basis. At the student level, the data showed whether or not the student correctly answered each test item, the number of items answered correctly for each objective, and whether or not the student had attained the objective. At the classroom, school, and district level, the information indicated the percentage of students who answered none, one, two, three, four or all of the five items for each objective and the percentage of students who achieved each objective. The criterion level for attainment of each objective (unlike Florida's criteria which varied with each objective) is set at answering correctly four out of the five items for each objective in order to reduce the chance of guessing the right answer on the multiple choice items. A listing of the students in each classroom who attained each objective also was provided.

On the word relationships test, results were reported in three ways for individual students: (1) a raw score which indicated the number of items the student answered correctly; (2) a standard score; and (3) a per cent below score which showed the percentage of students that had a lower standard score. Summaries of this information, presented in a standard score distribution, were provided at the classroom, school, and district levels.

Reports of the attitude test results consisted of summary information at the classroom, school, and district levels. No individual results were prepared; the questionnaires were anonymous.

Reporting Categories 1974-75

For the 1974-75 assessment, results of the objective-referenced tests in reading and mathematics for grades 4 and 7 are presented in the same manner as in the 1973-74 program. Information again is reported by individual student and at the classroom, school, and district levels. The Individual Student Report shows how each student answered the test questions and whether or not the objectives were achieved. The Classroom Listing Report summarizes for each teacher the performance of each student in the class and the class performance on each objective. The school principal received a set of the student records and a summary report for the school. Data for each school building and for the district were sent to the local superintendents.

Because of the sampling procedures used for the first grade assessment, only statewide results were compiled for limited public release and for state officials, but each classroom and school received data on the objectives they tested.

Other reports will be prepared for groupings of districts and schools. At the fourth and seventh grades two optional methods of reporting assessment results will be available to each school district: (1) seventh grade results will be reported according to feeder elementary school at no extra cost to the district, and (2) an optional "research code" method will be utilized that will enable the districts to observe the relationships between assessment results and other educational variables of particular interest to the district. This option will be processed at the local district's cost. From the beginning, the assessment program in Michigan has been collecting, analyzing, and reporting descriptive data about each K-12 district on a number of variables in the categories of human resources, district financial resources, dropout rate, racial-ethnic minority status, and district size measures. These variables are variously reported at state, district, school, classroom, and individual student levels. Student background characteristics previously were collected, but these measures were discontinued because of the controversy they generated among parents.

The word relationships test and attitude test were available on an optional basis in 1974-75. Reporting for the word relationships test consists of individual pupil results as well as summaries at the classroom, school, and district levels. No individual student data are reported for the anonymous attitude questionnaires, but summary information is provided at the classroom, school, and district levels. A statewide summary and item analysis are provided to the participating districts after all the data has been processed.

Reporting Categories 1975-76

Reporting categories will be the same for the 1975-76 assessment as in 1974-75 except for the addition of one other category. In 1975-76 each school and district will be provided the percentage of students who chose each possible answer for each item. Since the attitude test and the word relationships test were not offered in 1975-76, results will not be reported in these areas.

Interpretation of Results

Explanatory booklets prepared by the Michigan Educational Assessment Program staff accompany the results. The booklets are designed primarily to help teachers analyze individual student and classroom results and to help administrators interpret the school and district summaries of the results. The administrators also assist the teacher in interpreting student and classroom results. Statewide results have been interpreted in articles, reports, and speeches by Michigan Department of Education staff.

The Department of Education staff cannot meet with each teacher or school principal in Michigan's 531 local school districts, but the staff does conduct regional meetings each year to provide information to local school personnel about the results of the assessment. Fall workshops are offered for local district administrators on the interpretation and utilization of the assessment results, and there is individual consultation with the districts. By contacting the key people in each district, interpretation of the assessment program is communicated to others in the districts. In addition, color filmstrips are distributed to the local school districts which explain the program and show how the results can be interpreted. A new filmstrip speaker's kit on school utilization of assessment results has been prepared for distribution to each school district.

The Michigan Department of Education is entering into contracts with various professional curriculum groups in the state that are involved in developing the objectives and test items for the assessment program. These groups will be asked to prepare interpretative reports of the results and to generate constructive conclusions. The Michigan Educational Assessment Program staff will assist the curriculum groups by serving as resource persons.

Dissemination of Results

For several years Michigan has been disseminating the results of the state's assessment program; during this process problems were encountered that had political, public, and professional repercussions. Certainly the program has not been embraced with open arms by everyone in the state, and critical articles about it have been published. Some of the criticism was ably refuted by the Department of Education staff; whether these messages have convinced the program's detractors is open to question. The Department staff is making an effort to improve communication and understanding about the assessment program because misunderstanding of the purpose and misinterpretation of the results of the program have occurred. An *ad hoc* committee now is assisting the assessment staff in developing ways to help educators interpret and use the assessment results, and the committee is coordinating and improving dissemination methods. Some of these methods are:

- Informational filmstrips, audio tapes, and story cards are sent to the local districts to increase teacher awareness and understanding of the assessment program.
- An in-depth training filmstrip, audio tape, and booklets are being distributed to teachers to aid them in the interpretation of results.
- Briefings are being held across the state to discuss with the local educators the new objective-referenced testing procedures.
- Training workshops are conducted to instruct local test administrators, coordinators, and curriculum specialists in the interpretation and utilization of the test results. Individual consultation is provided to the districts upon request.
- Leaflets about the assessment program are disseminated to the local schools for pupils to take home; leaflets also are distributed at parent-teachers meetings and other organization meetings.
- News articles are prepared that highlight various aspects of the assessment. Articles are prepared for professional magazines. In the future, more of these articles will be interpretive, and they will suggest to members of the educational profession needed changes to improve the educational system.
- Bulletins will demonstrate how local district agencies can follow up on statewide results to make local appraisals.

Utilization of Results

The Michigan Department of Education asserts that the assessment results can assist state professional curriculum organizations in planning and that research studies can be conducted to discover the relationships between educational variables and pupil achievement. Each year of the Michigan assessment program, financial resources are reported for every district in the state and human resources are reported for every school, school district, and for the state. This information also can contribute to the interpretation of the assessment results.

Title I districts use the Michigan assessment program data to assist in identifying the reading and mathematics needs of the pupils.

On the local level, when a large number of low-achieving students is found in a school or district, local educators can review their local curriculum, teaching materials, and instructional practices to see whether changes should be made and if additional assistance is needed by the students. The results also can help parents who want to supplement their children's school learning.

Many local districts are making progress in establishing accountability programs that are based upon the state's six-step accountability model, of which the assessment program is one part. The six-step accountability model is described in Section III under Status of Implementation of Legislative Acts by Connecticut, Florida, and Michigan.

Cost and Staffing of Assessment Programs in Connecticut, Florida, and Michigan

Table 15 indicates the approximate costs involved in the assessment programs of Connecticut, Florida, and Michigan for fiscal year 1974-75, the percentage of the total funded by the state, and the people who make up the staff responsible for the programs in each state. Costs do not include full time equivalent salaries. They do include contracted costs for such tasks as scoring, analysis, printing, and test development, as well as for miscellaneous supplies, materials, and services.

Table 15

Cost and Staffing of Assessment Programs in Connecticut, Florida, and Michigan Fiscal Year 1974-75

State	Cost (not FTE salaries)	% State Funding	Staff
Connecticut	$126,000 (science; ages 9, 13, & 17)	56%	Director of assessment, 1 consultant, 1 half-time associate consultant, 1 secretary.
Florida	$700,000 (reading, writing, & mathematics; grades 3 & 6)	71%	Director of assessment, 1 educational consultant III, 1 educational consultant II, 1 school service specialist, 1 statistician, 1 statistical aide, 1 secretary.
Michigan	$829,000 (reading & mathematics; grades 4 & 7; grade 1 pilot test)	100%	Supervisor of assessment, 4 Ph.D.-level consultants, 2 MA consultants, 1 MA analyst, 4 secretaries.

Status of Implementation of Legislative Acts
By
Connecticut, Florida, and Michigan

To return to the legislation enacted by the three states, it can be noted that, in most instances, the states have carried out the majority of the directives in the laws or are in the process of doing so and, in some cases, have instituted steps that go beyond what is specifically required by statute.

Connecticut

Connecticut's broad mandate to develop a plan for the assessment and evaluation of educational programs has resulted in the preparation of state learner outcome goals and three objective-referenced needs assessments conducted thus far (one scheduled for the fall of 1975) based upon the assessment and evaluation procedures that were developed.

Connecticut's six educational goals not only reflect desired learner outcomes in that state, but also serve as ultimate criteria for Department of Education programs and as the basis for the development of performance objectives in each unit of the Department for a program planning and budgeting system currently being devised. A total of 134 objectives under five Department goals was developed for 1974-75.

Florida

Florida has been implementing the directives for administering a statewide assessment program contained in the Accountability Act of 1971 and, more recently, in the 1974 Act which amended the earlier Act. A major directive in the Florida law that has proved difficult to implement is a cost analysis of educational programs and an analysis of the differential effectiveness of instructional programs which is to be included in the annual public report. This is a complex procedure to develop and make workable.So far information on costs and instructional programs has not been included in the reports of the results of the assessment, but a footnote in *The 1972-73 Technical Report* states that the collection of data for this part of the program "will become operative at a later date."[13]

The Florida Department of Education's Research and Development Section is developing methods and techniques concerned with cost analysis that are being operated on a trial basis in some of the local districts. One method is called the Cost Analysis Management Information Ssytem (CAMIS) which is copyrighted, and the Department of Education hopes that all the Florida public school districts will be using the CAMIS system within the next few years. Under this system a district can ascertain the cost of a new offering, or of any subject area or grade level; compare the cost of one instructional method with another; and use CAMIS with pupil assessment to evaluate the efficiency of instruction. Another technique is the Supplementary Cost Analysis which supplements CAMIS and is being tested in pilot schools in the state. By this method detailed cost information on a limited program can be obtained; for example, the cost of establishing a chemistry laboratory course.[14]

The CAMIS manual was issued to Florida School districts in September, 1972. It was revised in 1974 and 1975 following a number of developments regarding the use of the manual which necessitated modifications in the system and a plan for uniform minimum implementation in all districts by 1975-76.

Michigan

After the administration of the first assessment, the Michigan State Board of Education adopted an analysis process, or an accountability model as it is commonly known, made up of six elements or a series of steps that are intended to lead to better educational planning both at the state and local levels. The six steps are:

1. Identification of common goals
2. Development of performance objectives
3. Assessment of needs
4. Analysis of delivery systems

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[13] *1972-73 Technical Report, Section 1, Assessment Procedures* (Tallahassee: Department of Education, 1974), p. 3, footnote 3.
[14] *Articles on Educational Accountability in Universal English* (Tallahassee: Department of Education, February, 1973), pp. 14, 15.

5. Evaluation
6. Recommendations for improvement

The *goals* have been identified at the state level. Minimal student *performance objectives* have been developed for the academic goals in several subject areas and now are being refined. Each district is encouraged to articulate its own goals and objectives to supplement the state's goals and minimal objectives.

The third step is proceeding in the form of the annual statewide *assessment* which provides information on pupil achievement and needs and collects data on staff, school, and financial resources for each school system in the state. Local assessment programs are encouraged. The Department of Education is planning to conduct a comprehensive program to help local educators develop their own assessment measures; this program probably will involve in-service training financed with state funds.

The fourth step, *analysis of delivery systems,* is concerned with the use of resources by the educational system to serve the needs of the pupils. The Instructional Specialist Program in the Michigan Department of Education is assisting local districts in analyzing their delivery systems in each instructional area, investigating the use of their resources, and adapting their programs to these needs.

Evaluation, the fifth step, indicates evaluations both at the state and local levels to determine the effectiveness of new programs. This information will provide a basis for determining continued allocation of resources to the programs. Successful progress can be identified and programs more responsive to the needs can be offered. At the present time, the Michigan Department of Education is evaluating seven of its programs. The evaluation encompasses approximately 1,100 projects in more than 500 local school districts. Consultative services and 30 or more workshops are conducted annually throughout the state to furnish technical assistance on evaluation to local agency staff. The Department also is running a survey of local and intermediate school districts to determine what resources and capabilities they possess for evaluation. More adequate services and expanded activities will be offered based upon the results of the survey.

Recommendation for improvement, the sixth element, draws upon the previous five steps and offers to the community recommended changes for the adoption of successful experimental or demonstration programs identified by previous steps.

Many local districts are making progress in establishing accountability programs that are based upon the state's six-step accountability model. They are being encouraged to develop such a model through a pilot program conducted by the Michigan Department of Education in elementary schools, six secondary schools, and an intermediate school district. The Department staff works closely with the principals, teachers, and administrators in the districts to implement each step of the six-step Michigan accountability model. The pilot programs serve as demonstration models for other districts and schools which want to introduce the accountablity model. Consultative services and workshops are offered by Department of Education staff to provide technical assistance in developing the model. Those involved appear to be generally satisfied with the plan and consider it a success. Both the Elementary and the Secondary School Principals Associations have requested training sessions for showing their members how to use the model.

Another impetus for local districts and schools implementing accountability programs similar to the state accountability model is the inclusion of the six-step accountability model as a part of the proposal needed in the local districts' applications for competitive grants under ESEA Title III. By 1974 more than 60 local school districts were using the six-step model through the Title III grants. Although technical assistance and workshops are provided by Michigan Department of Education staff in the districts that request them, limitation of Department staff has caused delays. It is hoped that those who learn how to implement the model will be able to help others apply it in their particular school or district.

Michigan's Assessment Act requests that the school systems be provided "with strong incentives to introduce educational programs to improve the education of students in such basic skills and model programs to raise the level of achievement of students" (Sec. 1 (c) of Public Act No. 38). Michigan reports do not specifically indicate what "strong incentives" have been introduced, although application of the six-point accountability model is addressed to new and model programs to raise the achievement of students, and the pilot program and the use of the model through ESEA Title III competitive grants have resulted in implementation of the model at the local levels.

Compensatory funds from the Michigan State Aid Act to improve the performance of students also may be perceived as an incentive for some of the local districts. As mentioned earlier in the report, funding was supplied by the Michigan State Aid Act, a four-year program, which amounted to $22 million in 1974. After the initial identification of a district with large numbers of low-achieving students (those who fell below the 15th percentile) , the district continued to receive funds only if satisfactory progress was shown by an evaluation of its compensatory program. The school received $200 for each pupil who subsequently achieved 75 per cent of the performance objectives set for him and this amount was prorated for lower achievement. Funding was based solely upon these students' pretests and posttests appropriate for the objectives of the local district's program, and monetary assistance was to be cut back or eliminated when schools did not show success in raising their performance level. The state assessment program was not used to measure success of a district's program; each district chose its own test instruments to measure their student progress. There were 529 K-12 districts in Michigan in 1974, of which 67 received funds from this program, ranging from $6,000 to $11 million. Detroit, the largest district, received about half of the $22 million. The program was audited in 1972-73, and the findings indicated that out of the 99,048 students pretested and posttested that year, 59.3 per cent achieved average gains equal to .75 months for each month of the program. Moreover, 34.5 per cent of the pupils achieved gains equal to or greater than one month for each month in the program.[15] The program was not entirely successful, however, principally because it proved to be impossible to withhold funds from a large district like Detroit which has produced low achievement scores but is well-represented politically in the state legislature.

Tables 13-15 reveal what legislative directives required in the Connecticut, Florida, and Michigan statutes have been completed or are in process; other objectives completed or in process that are not required in the laws; and future objectives interpreted by the agencies to be in keeping with the laws.

Table 16

Status of Implementation of Connecticut's Public Act No. 665

Legislative Directives Completed or in Process	Accountability Objectives Completed or in Process Not Required in Legislation	Future Objectives
Developed a plan for the assessment and evaluation of educational programs Prepared public results of assessment program and an annual report to Governor and legislators containing evaluations and recommendations for all other educational programs mandated by the General Assembly, including the assessment program	Developed state goals Conducted 3 assessments (reading, science, and second reading assessment) Encouraged districts to develop comparable local assessment programs	To refine state goals To continue assessment on an annual basis in several subject areas To develop an assessment prediction instrument to show performance level expectations of districts, taking variables into consideration

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[15] *Staff Response to the MEA/NEA Panel Report, An Assessment of the Michigan Accountability System* (Lansing: Department of Education, April 30, 1974) p. 29.

Table 17

Status of
Implementation of Florida's Revised Educational Accountability Act

Legislative Directives Completed or in Process	Accountability Objectives Completed or in Process Not Required in Legislation	Future Objectives
Developed and administering statewide assessment program, using criterion-referenced testing Established performance objectives in reading, writing, and mathematics for grades 2, 3, 4, 6, and 9, and in science for grades 6 and 9 Prepared and interpreted public reports of assessment results Department of Education assisting local districts to prepare annual public reports by grade and subject area for each school in the district Changed to census testing of grades 3 and 6 in 1974-75, as requested in amended law Preparing for census testing of grades 3 through 6 by 1974-75, as requested in law Replicated a sample NAEP assessment to compare state results with national results Developing objectives which reflect terminal outcomes, as required in amended law; these are in the form of general skills statements rather than specific objectives	Developed state goals Developed Cost Analysis Management Information System and the Supplementary Cost Analysis Program	To provide predicted scores based upon 1974-75 non-school variables for comparison with total test score results To prepare special research reports, such as reporting results by categories of sex, race, and socioeconomic status, and relation to other variables To prepare an analysis and recommendations concerning the costs and differential effectiveness of instructional programs required by law to be included in the annual public report

Table 18

Status of Implementation of Michigan's Public Act No. 38

Legislative Directives Completed or in Process	Accountability Objectives Completed or in Process Not Required in Legislation	Future Objectives
Developed state goals Identified students in need of remedial assistance and provided information for allocation of state funds Assessed two grade levels (4 & 7) annually since 1970. Expansion to grade 1 took place in 1974; to grade 10 in 1975 (pilots) Introduced objective-referenced testing as a better way to determine achievement and learning of individual pupils and to obtain more useful results for planning remedial assistance programs Six-step accountability model provides for evaluation of programs, introduction of new programs, changes in programs for improvement Evaluation of several Department of Education programs being conducted that involve 1,100 projects in more than 500 local districts Information is collected on staff, school, and financial resources and used with the information on pupil achievement to improve educational decision making	Performance objectives developed in 8 subject areas; others being developed or being refined for other grade levels Development of the six-step accountability model and a pilot program to implement the model in local districts and schools Consultative services and workshops to provide technical assistance to local districts in the area of evaluation	Preparation of interpretive reports of assessment results Annual audit of the assessment policies and procedures conducted by advisory groups in Michigan An active promotion plan for dissemination and utilization of assessment results and the meaning of accountability In-service training funded by the state to help local educators develop assessment measures Training sessions in the use and implementation of the six-step accountability model in local districts and schools planned for Elementary and Secondary School Principals Associations

SECTION IV. SOME MAJOR ISSUES

Accountability is a very complex theory to put into practice; therefore, it is not surprising that attempts to translate accountability into workable procedures have been beset by numerous difficulties. Some of these difficulties stem from the current "state of the art" and are technical, while others are less tangible, more frustrating, and generally political in nature. Some of the technical, communicative, and political problems which emerged during the course of the research for this report are described in this section. For those who are in the early stages of developing accountability and/or assessment programs, we hope this section will help in their planning. For those who are further along and have encountered such problems we trust the review will be painlessly refreshing.

Educational Accountability: A Confusion in Meaning

Superintendent of Public Instruction John Porter has defined educational accountability for Michigan's purposes as determining how the educational community, in cooperation with the state's citizens, can improve student learning and performance.[16] Certainly accountability has this meaning, but we would add the necessity for the efficient use of public funds through attention to cost analysis and public reporting.

The meaning of the term "educational accountability" has become increasingly ambiguous because of the application of the word to a particular method for achieving the purpose of the concept. Thus, accountability often is equated with PPBS, teacher evaluation, performance-based school accreditation or, most commonly, with educational assessment, all of which are different approaches for obtaining accountable results. In addition, accountability has taken on emotional overtones which strongly influence one's acceptance or rejection of a particular method. It is essential that educators, legislators, and citizens be informed that accountability is a continuous improvement process approached by many paths on a participatory or shared responsibility basis on the part of lay, legislative, and educational persons. Each *method* utilized to achieve accountability should be differentiated from the *concept* of accountability and judged on its own merits.

Explanations of accountability and the complexities of evaluation and assessment should be reduced to language that is understandable to people who do not have the technical background for the more sophisticated terms used by many educators. In particular, this need applies to local boards of education and the teachers, parents, and citizens out in the local districts.

Accountability: Locus of Control

The concept of accountability and all its applications are predicated on the assumption that individuals or groups will be able to make better educational decisions by drawing from the best information available to them. Given this premise, it is not unusual that accountability often has been analyzed, defended, and assailed in the framework of control theory.

One basic issue appears to be state versus local control of the education offered our young people. Local autonomy and local authority for making decisions play a prime role in the American system of education. Traditionally the state has given its constitutional responsibility for education to the local education agencies, but with increased state financing and public pressure for accountability, there are those who believe that stronger state influence and guidance is necessary to ensure that the tax dollar is being used productively. Each state's citizens must work out for themselves what the local/state balance of control should be, but if an accountability program is being introduced, it is imperative that local educators, local citizens, and local professional organizations be involved in the design, implementation, and evaluation of the programs. Without such involvement, the chances of acceptance at the local level will be less certain, and the accountability program itself will have less chance of success. Colorado's accountability program is an example of a strong effort to maintain local autonomy and to promote understanding and acceptance of accountability at the local level. Although the Colorado approach will take time to implement fully, the local district and state accountability programs will have a strong foundation upon which to build accountability as a continuous improvement process. If no time constraints are imposed, some states may want to follow the route Colorado has taken to obtain accountable results.

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[16] "The Observations and Conclusions of the Superintendent of Public Instruction," *Part III of the Public's Understanding of & Attitudes Toward Educational Accountability* (Lansing; Department of Education, 1974)

Planning Time

One of the most common problems with mandated state assessment or accountability programs arises from the fact that, in many instances, the state education agency is requested to implement the program within a few months after passage of the law. Either the time constraint is specifically stated in the law itself (Florida), or state budget appropriations are granted that are to be expended in the fiscal year, which usually means within a few months of passage (Michigan). Florida's first assessment had to be conducted in less than a year after the Accountability Act was passed. The Michigan state agency staff wanted three years to plan a comprehensive state assessment program; instead, the first assessment was scheduled to be administered only five months after the funds were appropriated.

A few states do provide lead time to make preparations for establishing a particular program. Maryland is one of these states whose 1972 Accountability Act mandated the establishment of an accountability program at the local school level and up to the State Board of Education level. Progress reports were not requested by law before January of 1975 for transmission to the Governor and General Assembly. Similarly, Indiana passed a law in 1971 to develop a PPBS which is to be operational by 1977. Sufficient time is necessary to develop a program and build adequate support for it, particularly when citizen participation is stressed. Otherwise, concessions have to be made which may be detrimental to the quality of the program. Unfortunately, many state legislators, citizens, and even some state board of education members expect and want immediate results. This was particularly true in the late 1960s and early 1970s when citizen and legislative pressures upon education agencies and schools for accountable results were at a peak. Now that other issues such as collective bargaining and school finances have moved to the forefront and, in the light of the realization, gained from experience, that accountability and assessment programs need time for planning, implementation, and evaluation, perhaps new laws or programs will be less demanding from a time frame point of view.

Problems with Contracted Firms

A major complaint both in Florida and Michigan concerns the delivery, on time, of products from contracted firms. Probably delays are more common with large and complicated programs such as those of Florida and Michigan, due to their very scope and size. Connecticut, which conducted a smaller program, did not report any problems with their contracted firms. Nor are all the delays necessarily the fault of the contractor; last minute changes in the programs by the state education agency can cause delays for the processors. For some of the delays, both Florida and Michigan surmised that the contracted firm did not always assign enough staff at crucial points of the assessment program, or the firm's project director was involved in several programs at the same time and delegated details to another person who was not familiar with the program. Florida found that even withholding payment until delivery did not prevent the delays. To try to solve the problem, Florida's latest contract states that the firm will be assessed a substantial amount for each working day beyond the scheduled deadline for materials. Rhode Island has followed the same route, as noted in its Request for Proposal for the 1975-76 state assessment program.

Florida and Michigan also stress the importance of personal contacts with the contracted firm on a periodic basis, rather than depending upon correspondence and telephone calls. The personal contacts are more conducive to satisfactory results.

Another problem related to contracted firms with which Florida is faced, and which may well be the case for other states, are state laws requiring a state agency to accept the lowest qualified bidder for a contract. This has meant that Florida has contracted with a different firm almost every year of the assessment program. Florida would prefer to contract with the same firm for a three-year period to maintain continuity and to save a great deal of staff time each year now taken up with instructions to the new firm regarding the program. Such a step would require special legislative authorization in the state.

Communication and Dissemination

Misinterpretation and adverse publicity concerning the results of an assessment or accountability program probably cannot be avoided entirely, but more effective means must be sought to overcome the lack of understanding of accountability and assessment programs on the part of educators, legislators, and the public. This is a communication problem that apparently is not going to be solved overnight. For instance, a Michigan survey of the understanidng of their six-step accountability model revealed that only four per cent of the general public surveyed was aware of the model by title, and only 58 per cent of the teachers in the survey knew of the process, yet Michigan has publicized its program more than most states.[17] Along with the printed word, Michigan now is making additional efforts with face-to-face meetings, filmstrips, and workshops to explain the program all over the state.

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[17] *The Public's Understanding of & Attitudes Toward Educational Accountability, Part III, The Observations and Conclusions of the Superintendent of Public Instruction* (Lansing: Department of Education, 1974), p. 116.

In the report, *Developing Dissemination Procedures for State Educational Accountability Programs,*[18] prepared by Michigan for the Cooperative Accountability Project, the problems and failures of communication and dissemination are documented, and many practical suggestions are presented for improvement in this difficult area. One criticism expressed in the report of Michigan's early approach to the news media stated that, although routine reports and releases were sent to the state level media, little attempt was made to interpret for the local media what the results meant, an omission which led to misinformation appearing in the local press. An interpretation of the results is necessary for technical, professional, and lay audiences.

Other omissions are pointed out in the Michigan dissemination study. Although the State Department of Education cooperated with newsmen who wanted to write feature stories about the assessment, feature stories with in-depth explanations of the program were not supplied voluntarily by the Department to the media over the state. Also, the market of other specialized media, such as union papers, church publications, League of Women Voters materials, alumni magazines, Chamber of Commerce bulletins, news organs of industrial plants, etc., were not contacted and supplied with releases. Video and audio tapes for use on local radio or television shows were not available. Michigan now is attempting to strengthen its dissemination program with the help of the *ad hoc* committee mentioned earlier that was established for the purpose of coordinating and instituting dissemination methods and improvements in communication.

The Cooperative Accountability Project report emphasizes the fact that responsibility for a dissemination program lies with a state's department of education. It cannot be delegated to the press. Central coordination of a dissemination program is necessary for a measure of success. Some of this responsibility can be delegated to the local districts; in the case of Florida, district coordinators contact local media and citizens concerning the program.

Use of Results

Too often an assessment program is embarked upon for political exigencies, and not enough initial thought is given to how the results might be constructively used. It is acknowledged that spin-off values have resulted from assessment programs. Many more local schools are giving greater thought to their curricula and are working through objectives. Assessment programs that test specific skills of pupils from a student outcome point of view are having an effect upon local school testing, but a great deal more can be done with the results of an assessment program than generally is the case. Corrective action should be taken, needed changes made, educational alternatives offered, and evaluations conducted. Frank Womer, in another Cooperative Accountability Project report prepared by him for Minnesota entitled, *Developing A Large Scale Assessment Program,*[19] has offered a considerable number of suggestions for the constructive use of assessment results as well as methods for communicating them.

In order to increase the chances of the results of a program being utilized, Womer points out that three important steps, among others, are necessary *before* the assessment program is devised. The gist of these steps can be stated as follows:

- Determine the *major* audience or audiences for which the program is designed.
- Focus the assessment from the beginning on specific purposes and list specific objectives or goals of the assessment program that will relate to the expressed needs of this audience.
- Make clear to the major audiences that the implication of the results of an assessment program is to bring about positive change if they do not reach expectations at any point. If the results warrant the reallocation of funds and staff, new and alternative programs, or the distribution of other resources, this action should take place or, at the least, the basic foundations for such changes should be put into effect. The mere publication of results does not necessarily bring about change. Someone must be responsible for seeing that change takes place.

In regard to the first point, it is necessary to determine major, specific audiences as the prime target for the assessment program and to make clear in the assessment reports that the program is directed to these audiences in particular; this is because no one type of an assessment program can entirely satisfy all audiences and groups who see the reports. Assessment results in most states generally are distributed to a variety of persons—legislators, state education agency decision makers, educational organizations of all types, teachers, parents, students, and other lay organizations and groups. It is financially unfeasible and too time-consuming to devise an assessment that provides each one of these audiences all the information they may wish to have from their own points of view. As Womer states:

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[18] Erwin P. Bettinghaus and Gerald R. Miller, *A Dissemination System for State Accountability Programs, Part III, Developing Dissemination Procedures for State Educational Accountability Programs* (Lansing: Department of Education, June, 1973).
[19] Frank B. Womer, *Developing a Large Scale Assessment Program* (Denver: Cooperative Accountability Project, 1974), pp. 81-87.

> A multi-purpose assessment program that is designed to meet the needs for educational information of persons at all levels of educational decision making runs the risk of not really providing the information that is maximally useful for any one of them.[20]

In regard to the second point, the purpose of the assessment and its objectives should be geared to the needs of the major audiences selected to receive the results, and these needs should be limited to the most vital educational needs at the time of the assessment. Womer suggests that examples of alternative reports, designed in different ways, be prepared to illustrate what particular audiences can expect from an assessment. In this manner, an audience can choose which type of report will be the most useful to it, a program can be devised, and its costs determined.

In regard to the third point, if a commitment to make improvements where necessary is not heeded or carried out, there is no point in spending thousands of dollars and substantial staff time in gathering data for information purposes only.

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[20] Ibid., p. 14.

SECTION V.
APPENDIX A. ANNOTATED REFERENCES

Colorado References

State Agency Representatives

Stanley A. Leftwich, Assistant Commissioner
State Department of Education
201 East Colfax Avenue
Denver, Colorado 80203

Kathryn DePew, Consultant
District Planning and Accountability Services
State Department of Education
201 East Colfax Avenue
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Leonard P. Landry, Director
District Planning and Accountability Services
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Denver, Colorado 80203

Dr. Arthur R. Olson, Project Director
Cooperative Accountability Project
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Denver, Colorado 80203

LEGISLATION

Title 22, Article 7, Colorado Revised Statutes, 1973, Educational Accountability Act of 1971. Denver: Colorado General Assembly, 1971.

This law is Colorado's comprehensive accountability act enacted in 1971 which requested goals and performance objectives at the state and local district levels, and a means for evaluating the achievements of educational programs and their impact upon student learning.

Title 22, Article 44, Part 2, Colorado Revised Statutes, 1973, Financial Policies and Procedures Act. Denver: Colorado General Assembly, 1973.

This Act repealed the Program Planning, Budgeting, and Evaluation System law of 1971. The bill calls for a program-oriented budget format which will relate anticipated costs and actual costs to designated programs. It is to be implemented by 1976.

Rules, Educational Accountability Act of 1971. Denver: Department of Education, 1975.

The Educational Accountability Act of 1971 mandated that the State Board of Education adopt rules and regulations to carry out the directives in the Act. This set of revised Rules was adopted by the State Board in July, 1975, and it reflects how the law will be implemented as interpreted by the State Board of Education, the State Accountability Advisory Committee, and the Colorado Department of Education.

EDUCATIONAL GOALS

Educational Goals for Colorado Citizens. Denver: Department of Education, February, 1971.

This brochure contains learner outcome educational goals and broad objectives (subgoals) adopted by the Colorado State Board of Education in February, 1971.

Procedure for the Development and Adoption of State Goals for Education Within the State of Colorado. Denver: Department of Education, 1972.

The procedures for the formation of process and institutional goals (management goals) are identified. Related performance and operation objectives, adopted by the State Board of Education in July, 1972, also are identified.

Possible Goals Supporting Quality Education for the State of Colorado. Denver: Department of Education, 1974.

This article lists nine possible learner outcome goals proposed by the State Accountability Advisory Committee as revised goals in accordance with the Accountability Act directive. Some background is provided of the steps that led to the proposed goals.

ACCOUNTABILITY SYSTEMS; MODELS

Gibson, John S. *On Quality in Education.* Denver: Department of Education, April, 1970.

This report was prepared in cooperation with the Colorado legislative Interim Committee on Public Education composed of ten legislators and five educators and school patrons. The report was of major significance to the development of the Colorado Educational Accountability Act of 1971, as many of the ideas in the report were drafted into the legislation.

Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1972.

The State Board of Education is required by the Educational Accountability Act of 1971 to report annually to the Colorado General Assembly on the progress of implementing the Act. This report describes the initial phases of implementation and includes sections on the development and administration of the program; a status report of local district achievements to date; and a recommendation for the Legislature. Local district progress in establishing local accountability committees and the status of district educational goals and objectives are the main events discussed. The role of the State Accountability Advisory Committee and the rules and regulations it established to carry out the Act are provided in the Appendix.

Highlights of the Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1972.

This report highlights the principal steps undertaken the first year of implementing the Accountability Act of 1971. It describes briefly the activities of the State Department of Education and the local districts as they progressed through the initial phases of the program.

General Accountability Model. Denver: Department of Education, June 1, 1972.

The model is a very general accountability model devised from the directives in the Colorado Accountability Act of 1971.

Second Annual Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1973.

This is the second report provided by the State Board of Education for the State Legislature covering the progress in implementing the Accountability Act of 1971. It indicates the status of the local districts in implementing each of the required accountability phases. This includes the establishment of local advisory committees; written reports or recommendations for local boards of education; goals, staff and student performance objectives; program changes based on objectives and pupil needs; computation of program costs; and student performance indicators. Recommendations addressed to the Colorado State Legislature also are given.

Summary Report—Second Annual Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1973.

This is a summary of the second report of the State Board of Education for the State Legislature on the implementation of the Accountability Act of 1971.

Third Annual Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1974.

This is the third report provided by the State Board of Education for the State Legislature regarding implementation of the Accountability Act of 1971. It covers the period from July, 1972, through June, 1973. Responses from the districts to open-ended questions include means of measurement for gathering data; local district reports to their communities; cost efficiency; educational decisions which would affect the quality of instructional programs; and difficulties encountered and forms of assistance reported as most useful in overcoming the difficulties. Tables show the progress of the local districts in conducting needs assessments and their purposes; updated goals and their publication; procedures for development of student and staff objectives and the percentage of school districts involved in this step; extent of change in program characteristics; and degree of assistance received by the districts from the Department of Education and other sources.

Background and Implementation Procedures for Educational Accountability in Colorado. Denver: Department of Education, August 10, 1972.

This paper presents a discussion of the meaning of accountability in the Colorado Accountability Act of 1971 and a review of accountability progress in the state. Problems and issues relating to the role of the State Board of Education in implementing the Act are described, and suggested solutions are provided.

DePew, Kathryn. "Accountability: Achievement and Goals." *Education Colorado,* Vol. IX, No. 8. Denver: Department of Education, April 2, 1974.

The Chairman of the State Accountability Advisory Committee explains how the Accountability Act is being implemented; the policies of the State Accountability Advisory Committee; the methods being used to establish accountability programs in the local districts; and the accomplishments and results that have come about. Some objectives that will be put into operation in the future also are discussed.

DePew, Kathryn. Article (untitled) to appear in the *Colorado School Board Bulletin.* Denver: Department of Education, November, 1974.

The objectives of the State Accountability Advisory Committee for the operation and establishment of local district accountability programs are summarized. A progress report of the accomplishments of the current year and what is planned for 1974-75 are described.

Fourth Annual Report on the Educational Accountability Act of 1971. Denver: Department of Education, February, 1975.

The report is an abstract of the information provided by the local school districts to the State Board of Education on their activities from July 1, 1973 through June 30, 1974. The progress of the local districts and their concerns are documented, as well as recommendations for further Department of Education assistance to the districts in the development of their accountability programs.

Supplement to the Abstract on the Fourth Annual Report on the Educational Accountability Law of 1971. Denver: Department of Education, 1975.

This is the second portion of the Fourth Annual Report which contains more detailed information on the progress and concerns of the local school districts in the development of their accountability programs. Tabulations and bar graphs are included.

ASSESSMENT AND EVALUATION

Procedure for Evaluation Within the Accountability Process. Denver: Department of Education, August, 1974.

The Accountability Act of 1971 directs that an evaluation mechanism be developed to measure the achievements and performance of students. The design of the evaluation procedure was completed by the Colorado Department of Education and the State Accountability Advisory Committee and was presented for State Board approval in May, 1974. This paper presents the procedure, which suggests steps that the local districts might take in developing a procedure for evaluation, but allows the local districts to develop the actual design for their evaluation procedures.

SCHOOL ACCREDITATION

A School Improvement Process: Accreditation by Contract. Denver: Department of Education, June, 1971.

This publication presents an overview of the concept of accreditation by contract as proposed by the Colorado Department of Education. It explains what is involved in comprehensive educational planning and contract accreditation and identifies the procedures necessary for the local districts to implement in order to achieve state accreditation by contract.

Accreditation of Colorado School Districts. Denver: Department of Education, January, 1975.

This publication contains the rules and regulations for the accreditation of school districts by the Colorado Department of Education. The rules and regulations cover two accreditation programs: (1) standard accreditation, and (2) accreditation by contract. It focuses upon the total school system, kindergarten through the twelfth grade.

FINANCIAL REPORTING MANUALS

Financial Policies and Procedures Handbook. Denver: Department of Education, January, 1976.

This handbook was developed in compliance with the Financial Policies and Procedures Act of 1973. It will be used as the official guide for Colorado public school districts prior to and following the development and implementation of a financial accounting system. Budgeting and reporting requirements are shown in the handbook. The financial policies and procedures will be a subsystem of a total management information system that incorporates budgeting and accounting data with pupil accounting, staff accounting, curriculum instruction, property accounting, and community profiles.

Connecticut References

State Agency Representative

Dr. George Kinkade
Director of Assessment
State Department of Education
State Office Building
Hartford, Connecticut 06106

LEGISLATION

Public Act No. 665, 1971 (Title 10, Conn. Gen. Statutes, S. 4). Hartford: Connecticut State Legislature.

This Act mandates the State Board of Education to develop an evaluation and assessment procedure for measuring objectively the adequacy and efficiency of the educational programs in Connecticut's public schools.

ASSESSMENT AND EVALUATION

Connecticut Reading Assessment 1971-72. Hartford: State Board of Education, no date.

This report summarizes the assessment of reading performance of a sampling of 9-, 13-, and 17-year-olds in the Connecticut public schools in 1972. Comparisons are made with National Assessment of Educational Process in the northeast, by sex, and by size of community NAEP test instruments were used and adapted to Connecticut objectives. Four performance objectives in reading were tested.

Report on the Assessment of Reading Skills of Connecticut Public School Students. Philadelphia: Institute for the Study of Inquiring Systems, no date.

This is a technical, detailed report prepared by the contractor of the assessment of reading skills performed in 1972 in the Connecticut public schools. It contains information about the development of objectives and test instruments to measure them; pretesting; sampling procedure used; administration of tests and administrator's instructions; copies of mailings to superintendents and principals involving instructions; data analysis methods and results. The results include the test items used and comparisons made with NAEP and regional (northeast) results, by sex, and by size of community.

Evaluations and Reports As Mandated by the General Assembly. Hartford: Department of Education, February, 1975.

A program evaluation is presented in response to the requirements of the *Connecticut General Statutes.* The requirements of each statute are noted, and the major program evaluations contain the objectives of the program, distribution of funds, need for the program, performance indicators, impact of the program, and recommendations.

EDUCATIONAL GOALS

Citizen Survey Forms. Hartford: Department of Education, 1972.

These are copies of citizen survey forms, short and long, for obtaining citizen opinions on proposed, tentative goals.

Connecticut Citizens Response to Educational Goals, 1971-72. Abridged edition. Hartford: State Board of Education, no date. ERIC ED 078 045.

This is a summary report, for public consumption, of the study made to determine public response to possible goals of Connecticut education, carried out in conjunction and simultaneously with the Connecticut Reading Assessment in 1972. There are six main goals and 82 subgoals. A brief description of the procedure used and an analysis of the responses are presented.

Connecticut Citizens Response to Educational Goals, 1971-72. Philadelphia: Institute for the Study of Inquiring Systems (ISIS), no date. ERIC ED 078 045.

This is a detailed report of the study conducted in 1972 to determine public response to suggested educational goals and subgoals. Prepared by ISIS, the report contains the background of the study; development of citizen response instruments; distribution of instruments and characteristics of respondents; methods of analysis; and results in order of importance. The six principal goals have been accepted by the State Board as working goals and are learner outcome goals.

Connecticut Citizens Comments on Educational Goals, 1971-72. Philadelphia: Institute for the Study of Inquiring Systems, no date. ERIC ED 081 804.

Another section of the ISIS goals study for Connecticut in which its citizens were invited to express their opinions about the educational process of the state. This report presents an analysis of their comments.

PPBS (PROGRAM PLANNING & BUDGETING SYSTEM)

A Working Paper for Evaluation Reporting. Hartford: Department of Education, October, 1973. Out of print.

Connecticut has instituted a PPBS for budget reporting to the General Assembly and for evaluating all state department programs. The six main pupil-oriented goals listed have been accepted as working goals by the State Board of Education and as the basis for the development of detailed objectives for the units of the Department. PPBS goals have been adopted that describe in general terms the responsibilities of the Department and its programs which will contribute to student achievement of the pupil-oriented goals. Departmental goals, with accompanying program objectives, are presented in one section of the report; another section presents departmental programs with objectives and indicators.

Preliminary Goals Statement. Hartford: Department of Education, June, 1974.

This statement presents the goals of the State Department of Education for improving education and discusses what needs to be done to attain them.

Mission for 1974-75. Hartford: Department of Education, July 23, 1974.

This document indicates the tasks and activities of all Department of Education administrators which will contribute to the attainment of five Department of Education goals.

Florida References

State Agency Representatives

Ms. Judy L. Haynes
Assessment Coordinator
State Department of Education
Tallahassee, Florida 32304

LEGISLATION

Title 15, Florida Statutes Annotated, S. 230.23, 1970. Tallahassee: Florida State Legislature, 1970.

This bill authorizes the Commissioner of Education to develop evaluation procedures for a state assessment program and to make a preliminary report to the State Board of Education and the House and Senate Education Committees by October 1, 1970.

Title 15, Florida Statutes Annotated, S. 229.57, 2974. Tallahassee: Florida State Legislature, 1974.

This bill amends the Educational Accountability Act of 1971. The amendments indicate that testing of all students in grades 3 through 6 is to take place by 1976. No other subject areas are to be tested until the assessment of grades 3 through 6 has been completed. Statewide results are to be compared to national indicators of student performance. An interpretation of the results for each school is to be reported in the annual report of school progress.

EDUCATIONAL GOALS

Goals for Education In Florida. Tallahassee: Department of Education, 1971. ERIC ED 055 048.

This article presents learner outcome and organizational goals of the Department of Education which were adopted by the State Board of Education in April, 1971.

ASSESSMENT AND EVALUATION

Plan for Educational Assessment In Florida. Final Report. Tallahassee: Department of Education, 1971.

This plan for educational assessment and accountability in Florida was submitted to the State Board of Education and the Legislature in March, 1971, by the Commissioner of Education, as mandated by legislation. It describes three phases of the model: product assessment, cost analysis, and process assessment. Norm-referenced and criterion-referenced tests are defined. The assessment plan, which is part of a larger plan for evaluation of the educational system, is summarized, and procedures are described for developing goals, performance objectives, and objective-referenced tests. The report contains a full explanation of multiple matrix sampling to be used in the assessment of reading in 1971. It includes test administration procedures, how results will be reported, and the audience to whom the results will be directed.

Initial Report on Statewide Assessment. Tallahassee: Department of Education, January, 1972.

This is a narrative summary of the background and various activities of the Florida Statewide Assessment Program. Information is given on pretesting of assessment procedures; test development; analysis of reading instruments; dissemination of information about the assessment; and management and planning aspects. Several attachments are included, among which are a discussion of how results will be reported and a list of 1971-72 high priority objectives for reading in Florida for students ages 7 and 9.

Florida Statewide Assessment Program — Capsule Report, 1971-72. Tallahassee: Department of Education.

This is a summary report of the 1971-72 key results and recommendations of the fourth grade student performance on the assessment of reading.

Florida Statewide Assessment Program — Technical Report, Section 1, Introduction, Procedures, and Program Recommendations, 1971-72. Tallahassee: Department of Education.

The report of the Florida Statewide Assessment Program performed in the 1971-72 school year for fourth grade reading is published in four sections. This is the first section which gives the background information of the program, the design of the program, and the responsibilities of those involved in the assessment activities. One chapter presents the procedures used in the assessment, specifying the selection of statewide objectives, testing population, selection of a random sample, test development, test contents, test validation, test format, administration of tests, test scoring, and recommendations on the program operation for improvement of the procedures for future assessments.

Florida Statewide Assessment Program — Technical Report, Section 2. Statistical Information, 1971-72. Tallahassee: Department of Education.

The second section of the Florida Statewide Assessment Program is a technical report which describes the item sampling and student sampling procedures used (multiple matrix sampling) ; problems with scoring and how they were resolved; how results were reported and the types of tables used; an explanation of standard error; and how district scores should be compared with state scores. Appendixes contain lists of reading objectives for age 7 (grade 2) and for age 9 (grade 4) ; statistical formulas used for standard error and for weighted district percentage of achievement; and tables showing 68 % confidence intervals for each objective for the districts and the state.

Florida Statewide Assessment Program — Technical Report, Section 3, Statewide Results and Recommendations, 1971-72. Tallahassee: Department of Education.

The third section of the Florida Statewide Assessment Program explains the classification of the objectives in order to present the results in a meaningful way, defines each classification, and includes a sample item with each classification The results are presented for grade 2 and grade 4, along with interpretations prepared by the state reading consultant.

Florida Statewide Assessment Program — Technical Report, Section 4, District Interpretations, Charlotte County, 1971-72. Tallahassee: Department of Education.

District interpretations were prepared for each school district in Florida of the results of the Florida Statewide Assessment Program. This fourth section is an example of a district report for Charlotte County which helps the district analyze the performance of their second and fourth grade students. Tables of results, interpretations, and recommendations for improvement of student achievement are provided.

Florida Statewide Assessment Program, 1973-73 Capsule Report. Tallahassee: Department of Education, 1974.

This report summarizes the key results and recommendations of the state's performance in the 1972-73 Statewide Assessment Program for grades 3, 6, and 9 in reading, writing, and mathematics. Objective-referenced instruments were used. A verbal summary is given of the results in this report. The basic reporting format utilized is the percentage of students in the state and each district who achieved each objective. These percentages are given in separate sections of the Technical Report, annotated below.

Florida Statewide Assessment Program, 1972-73 Technical Report, Section 1, Assessment Procedures. Tallahassee: Department of Education, 1974.

This report contains the procedures used in Florida's Statewide Assessment Program conducted in 1972-73 for grades 3, 6, and 9 in reading, writing, and mathematics. These include choice of design; contracting; development, selection, and evaluation of objectives; test development, contents, format, and test administration; validity and reliability of the tests; testing population; and sampling.

Florida Statewide Assessment Program, 1972-73 Technical Report, Section 2, Priority Skills and Statewide Results, Volume B — Grade 6. Tallahassee: Department of Education, 1974.

The results of objective-referenced testing of approximately 19,500 students in grade 6 in March, 1973, are reported in terms of the percentage of students in each district in the state who achieved each objective. Priority objectives for grade 6 (age 11) for reading, writing, and mathematics are provided in the Appendix. An interpretation of results is included.

Florida Statewide Assessment Program, 1972-73 Technical Report, Section 2, Priority Skills and Statewide Results, Volume C — Grade 9. Tallahassee: Department of Education, 1974.

The results of objective-referenced testing of approximately 14,500 students in grade 9 in February, 1973, are reported in terms of the percentage of students in each district and in the state who achieved each objective. Priority objectives for grade 9 (age 14) for reading, writing, and mathematics are provided in the Appendix. An interpretation of results is included.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 2, Priority Skills, Volume A: Grade 3, Reading, Writing, and Mathematics. Tallahassee: Department of Education, 1975.

This report presents information about the kinds of skills assessed and the types of test items used for the objective-referenced testing of grade 3 in February, 1974. A short background of the assessment program and the procedures used in the 1973-74 assessment are provided. Priority objectives for reading, writing, and mathematics for grade 3 appear in the Appendix.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 2, Priority Skills, Volume B: Grade 6, Reading, Writing, Mathematics, and Science Tallahassee: Department of Education, 1975.

This report presents information about the kinds of skills assessed and the types of test items used for the objective-referenced testing of grade 6 in February, 1974. A short background of the assessment program and the procedures used in the 1973-74 assessment are included. Priority objectives for reading, writing, mathematics, and science for grade 6 appear in the Appendix.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 2, Priority Skills, Volume C: Grade 9, Reading, Writing, Mathematics, and Science. Tallahassee: Department of Education, 1975.

This report presents information about the kinds of skills assessed and the types of test items used for the objective-referenced testing of grade 9 in February, 1974. A short background of the assessment program and the procedures used in the 1973-74 assessment are given. Priority objectives in reading, writing, mathematics, and science for grade 9 are included in the Appendix.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 3, Statewide Results, Volume A: Grade 3, Reading, Writing, and Mathematics. Tallahassee: Department of Education, 1975.

This report analyzes the performance for the state as a whole in each subject area and interprets the results of the February, 1974, assessment of grade 3. A short background of the assessment program and 1973-74 procedures are included. Some comparisons are made with 1972-73 achievement results. Priority objectives in reading, writing, and mathematics for grade 3 are provided in the Appendix.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 3. Statewide Results, Volume B: Grade 6, Reading, Writing, Mathematics, and Science. Tallahassee: Department of Education, 1975.

This report analyzes the performance for the state as a whole in each subject area and interprets the results of the February, 1974, assessment of grade 6. A short background of the assessment program and the 1973-74 procedures are included. Some comparisons with 1972-73 results are provided. Priority objectives in reading, writing, mathematics, and science are given in the Appendix.

Florida Statewide Assessment Program, 1973-74 Technical Report, Section 3, Statewide Results, Volume C: Grade 9, Reading, Writing, Mathematics, and Science. Tallahassee: Department of Education, 1975.

This report analyzes the performance for the state as a whole in each subject area and interprets the results of the February, 1974, assessment of grade 9. Some comparisons with 1972-73 results are provided. A short background of the assessment program and the 1973-74 procedures are included. Priority objectives in reading, writing, mathematics, and science are given in the Appendix.

Florida Statewide Assessment Program, Guide to District and School Assessment Results, 1973-74. Tallahassee: Department of Education, 1975.

This report describes the information provided in the tables of results for each district and school in the state, grades 3, 6, and 9, which participated in the statewide assessment program in reading, writing, mathematics,

and science during 1973-74. An overview of the 1973-74 assessment program and a brief summary of technical information needed to understand the tables of results are included. Approximately 112,000 students were selected for testing.

Haynes, Judy L. and Crane Walker. *Operating An Objective-Reference Testing Program: Florida's Approach to Large-Scale Assessment.* Tallahassee: Department of Education, 1975.

This informative report is a publication prepared for the Cooperative Accountability Project by Florida, one of the member states of the Project. The focus is on objective-referenced testing, and the paper describes some of the developmental procedures Florida has implemented in the last three years. Included are subjects that take up procedures for establishing goals and objectives, contracting, training of persons involved in administering the assessment, and procedures for administration and scoring. An appendix containing technical specifications for objectives, test items, assessment exercises, test construction constraints, and field test specifications is included. Several helpful suggestions on the development of assessment programs are pointed out.

Kelly, Jack. "Assessment Moves to Census Testing." Reprinted from *Florida Schools,* October, 1974.

This article discusses the change from sample testing to census testing in the Florida Statewide Assessment Program, as mandated by the 1974 State Legislature in the amended Accountability Act of 1971. The implications of census testing in terms of reporting the results is discussed, and a replication of the NAEP in reading and mathematics, which Florida is running for 9-, 13-, and 17-year-olds is described. The amended Act also requires a comparison of state performance with national performance, and the NAEP replication complies with this request.

ACCOUNTABILITY SYSTEMS; MODELS

Articles on Educational Accountability In Universal English. Revised ed. Tallahassee: Department of Education, February, 1973.

This booklet, written in lay terms, highlights the several approaches Florida is taking to carry out its accountability plan. It includes activities of the Department of Education and the local districts, with major administrative responsibility at the state level, and activities supporting accountability carried out by the local school districts. Other articles are concerned with techniques to further accountability that presently are being developed by the Florida Educational Research and Development Program, administered by the Department of Education.

STATE BOARD, DEPARTMENT OF EDUCATION POLICIES

The Role of State Government in Education. Tallahassee: Department of Education. (Policy paper approved by Administrative Council on May 8, 1972.)

This paper cites constitutional and statutory provisions for public education; inherent expectations and constraints; and lists nine state responsibilities of the state role in education. This is the first in a trilogy of Department of Education policy papers.

Education Renewal: The Florida Strategy. Tallahassee: Department of Education, May 8, 1972.

The second policy paper of the Department of Education is concerned with the Florida strategy of educational renewal, which includes all activities directed toward identifying, developing and installing new procedures or practices in educational institutions. The strategy is based on three basic elements of identifying clear goals and objectives, assessment and analysis, and identification of additional ways to achieve the objectives, or alternative educational practices. Each of the three elements is discussed in detail.

Guidelines for Internal Planning and Evaluation in the Florida Department of Education. Tallahassee: Department of Education, May 8, 1972.

The third policy paper of the trilogy issued by the Department of Education discusses Department internal planning and evaluation processes and criteria to consider as basic guidelines in planning and evaluating programs.

COST EFFECTIVENESS; COST ANALYSIS

Cost Analysis Management Information System (CAMIS). Copyright 1972. Tallahassee: Department of Education.

Explains a new accounting system for Florida's public school districts called the Cost Analysis Management Information System (CAMIS). Explains the need and development of CAMIS and its dimensions and provides guidance in the implementation of CAMIS.

A Manual ... Financial and Program Cost Accounting and Reporting for Florida Schools. Reprint #1, Tallahassee: Department of Education, March, 1975.

This manual is a revision of the *Cost Analysis Management Information System (CAMIS)* manual issued to Florida school districts in 1972. The revisions followed a number of developments regarding the use of the 1972 manual which necessitated modifications to the system and a plan for uniform minimum implementation in all districts by 1975-76.

PERFORMANCE OBJECTIVES, DEVELOPMENT OF

Healy, John and others. *Classifying Performance Objectives.* Tallahassee: Department of Education.

This report demonstrates how to construct and classify performance objectives, with examples. The five primary categorizations are motor skills, verbal information, intellectual skills, cognitive strategies, and attitudes.

SAMPLING PROCEDURES

Sampling Procedure. Preliminary Test of Reading Related Skills, 1971-72. Tallahassee: Department of Education, no date.

This is an explanation of the sampling procedures to follow in selecting students to take a preliminary test of selected reading skills, 1971-72. This explanation is directed to the school principal, school coordinator, or other designated personnel who are to choose the sample one week prior to assessment.

Michigan References

State Agency Representatives

Mr. Robert J. Huyser, Supervisor
Research, Evaluation, and Assessment Services
State Department of Education
Box 420
Lansing, Michigan 48902

Dr. Thomas H. Fisher, Coordinator of Dissemination
Research, Evaluation, and Assessment Services
State Department of Education
Box 420
Lansing, Michigan 48902

LEGISLATION

Public Act No. 307, 1969 (S. 14 of fiscal bill) Lansing: Michigan State Legislature, August 12, 1969.

Initiated by the State Department of Education, this Act authorizes the Department of Education to develop a state assessment program that objectively measures pupil learning outcomes in basic skills.

Public Act No. 38, 1970 (Vol. 18, Mich. C.L.A., S. 388. 1081-1086). Lansing: Michigan State Legislature, 1970.

This Act is a more comprehensive law mandating the state assessment program, with several accountability approaches.

EDUCATIONAL GOALS

The Common Goals of Michigan Education. Lansing: Department of Education, September, 1971.

This article provides information on the development of educational goals for Michigan and presents the learner outcome goals as adopted by the State Board in 1971. Also included are four suggested programs leading to the attainment of the goals: quality teaching, accountability, assessment and evaluation, and research and development.

ACCOUNTABILITY SYSTEMS; MODELS

A Position Statement on Educational Accountability. Lansing: Department of Education, 1972.

The statement presents the role of the State Board of Education and Department of Education in implementing an accountability model for Michigan's educational enterprise.

Taking Michigan's Educational Pulse. Brochure. Lansing: Department of Education.

This brochure explains the six steps that make up Michigan's accountability model.

Porter, John W., *Accountability in Education.* An Address. Lansing: Department of Education, March, 1971.

This is an address by Dr. John Porter, Michigan's State Superintendent of Public Instruction, regarding his understanding and beliefs about accountability and some of the problems involved in establishing an accountability system.

ASSESSMENT AND EVALUATION

The Assessment of Educational Progress in Michigan. Memorandum. Lansing: Department of Education, January 28, 1969.

This memo to the Michigan State Board of Education regards plans for an assessment of educational progress for the state. It gives the background of assessment in other states and in the U.S.; a possible rationale and procedures for periodic assessment in Michigan; a discussion of opposition to the assessment; and recommendations for the Michigan State Board of Education.

Purpose and Procedures of the Michigan Assessment of Education: Assessment Report Number One. Lansing: Department of Education, August, 1969. ERIC ED 046 984.

This report outlines for local school district personnel and other interested readers the first of the assessment activities that took place during the 1969-70 school year. The report cites the purposes of the assessment; gives some information on the assessment of basic skills the first year; and presents a study of variables descriptive of pupil backgrounds and school and school system resource levels which Michigan terms "correlates."

Activities and Arrangements for the 1969-70 Michigan Aseessment of Education: Assessment Report Number Two. Lansing: Department of Education, December, 1969. ERIC ED 046 985.

Report Number Two provides a summary of the progress in the assessment program for 1969-70 and details some of the actual mechanics of the program. These details include the selection of local district coordinators; the appointment of a technical advisory group; naming a specifications committee to review test specifications; organizing a citizens' committee on goals; the administration of the test battery; subject areas and grades being assessed; data analysis; and reporting the results.

Technical Report of Selected Aspects of the 1969-70 Michigan Educational Assessment Program. Lansing: Department of Education, August, 1971. Prepared by ETS, Princeton, N.J. ERIC ED 064 286.

The report describes in detail the development of the 1969-70 assessment instruments used in assessing the levels and distribution of educational performance for the state's districts, schools, and pupils. It contains a brief description of the 1969-70 assessment program, its purposes and procedures; details of the construction of the achievement battery and the pupil background questionnaire; the development of the scaled scores arising from the statistical treatment of responses to the items in the battery; and characteristics of the battery components.

Levels of Educational Performance and Related Factors in Michigan: Assessment Report Number 4. Lansing: Department of Education, 1970. ERIC ED 046 987.

The three sections in this report present the highlights of the results of the 1969-70 assessment; explain precautions to be taken in the interpretation of the data; describe the assessment measures used; and present education profiles for Michigan's regions and community types, one for each of the state's four geographic regions, and for the fourth and seventh grades.

Distribution of Educational Performance and Related Factors in Michigan: Assessment Report Number 5. Lansing: Department of Education, 1970. ERIC ED 046 988.

This report of the 1969-70 Michigan Assessment Program presents data which indicate the ways in which educational performance and certain factors (variables) related to performance are distributed in the state. The first section summarizes the findings presented in the report. The second states precautions to be taken in the interpretation of the data. The third presents definitions of the assessment measures used in the report. The fourth section explains how the educational distribution tables were prepared, and the fifth contains the educational distribution tables and brief summaries of the findings in each table.

Local District Report: Explanatory Materials: Assessment Report No. 6. Lansing: Department of Education, 1970. ERIC ED 045 733.

The purpose of this report is to provide local school district officials and citizens with information regarding their own school district and its schools in regard to the 1969-70 assessment program. The first section presents the precautions to be taken in the interpretation and utilization of the data. The second section explains the format of the data presented in the local district's computer printout. The third section defines the assessment measures, and the fourth describes the norm tables that are provided in the booklet.

Local District Report: Supplementary Explanatory Material: Addendum to Educational Assessment Report No. 6. Lansing: Department of Education, February, 1971.

This report provides local school officials with additional interpretative assessment information from the 1969-70 program written in nontechnical language. The first section provides definitions of certain statistical terms used in the assessment effort. The second section outlines the construction and meaning of the 1969-70 assessment scores. The third section discusses the construction and use of pupil norm tables which are provided in the booklet. An appendix lists the socioeconomic and attitude questions used in the assessment.

Distribution of Educational Performance and Related Factors in Michigan: A Supplement: Assessment Report No. 8. Lansing: Department of Education, 1971. ERIC ED 059 254.

This report presents supplementary data that indicates ways in which educational performance and certain factors (variables) related to performance are distributed in the state as determined by the results of the 1969-70 assessment program. Limits of the data and cautions to be exercised in their interpretation are presented; the measures used in the assessment program are described; and the construction and interpretation of the educational distribution tables are explained. Brief written summaries of the findings of the major tables are included.

Levels of Educational Performance and Related Factors in Michigan: A Supplement, Assessment Report No. 9. Lansing: Department of Education, December, 1970.

Supplementary material is presented in this report regarding data which shows the level of educational performance and the levels of certain factors (variables) related to performance within Michigan's geographic regions and community types reported in an earlier document. It utilizes and describes all the performance levels of all the factors gathered in the assessment.

The report contains education profiles for geographic regions and community types of three varieties: (1) profiles constructed from district-level assessment results; (2) profiles constructed from school-level assessment results; and (3) profiles constructed from pupil responses to the 1969-70 assessment battery. Examination of the profiles will enable the reader to understand the levels of educational performance, as measured by basic skills achievement, and certain factors or variables presumed to be related to performance in the state's geographic regions and community types.

Objectives and Procedures of the Michigan Educational Assessment Program, 1970-71: Assessment Report No. 7. Lansing: Department of Education, 1970. ERIC ED 049 299.

Report No. 7 presents the 1970-71 objectives and procedures for the second year of the Michigan Educational Assessment Program.

1970-71 Individual Pupil Report: Explanatory Materials. Lansing: Department of Education, April, 1971. ERIC ED 053 217.

The first report of the results from the 1970-71 assessment of grades 4 and 7 is intended to provide school districts with basic information regarding students that will help them, their parents, and educators to assess their progress. The first section describes the content of each test (vocabulary, reading, mechanics of written English, and mathematics). Cautions to be used in interpreting the data are expressed, and an explanation of how to interpret the materials accompanying the booklet is provided, as well as explanations for pupils' scores. A final section defines statistical terms used in the program and provides technical information regarding the assessment battery.

Local District and School Report: Explanatory Materials: The Third Report of the 1970-71 Michigan Educational Assessment Program. Lansing: Department of Education, June, 1971. ERIC ED 059 255.

The purpose of this report of the 1970-71 assessment is to provide local school district officials with information regarding their own school district and its schools to assist them in making local decisions in the allocation of resources and the design of educational programs. It also provides a general indication of the areas within the local school district which may need closer study. The first section describes precautions to consider in using and interpreting the data and defines statistical terms used. The next section outlines the assessment measures and introduces the computer print-outs containing the local district and school data. The third section describes the norm tables provided with the report.

Local District Results, Michigan Educational Assessment Program: The Fourth Report of the 1970-71 Series. Lansing: Department of Education, December, 1971. ERIC ED 064 288.

The purpose of this report is to provide the public with information regarding the average scores on the 1970-71 educational assessment measures of all public school districts in the state. It provides a general indication of areas within the local school district which may need closer study. Each of the district measures is presented in two ways: first, a figure is shown that represents the district's score on each measure; second, a percentile rank is shown for each measure that indicates how each district fared in relation to the other districts on each of the measures. Decile distributions are included to show what percentage of the district's fourth and seventh grade pupils earned composite achievement scores in each decile of a statewide tabulation of pupil scores. They show what percentage of each district's pupils fell into each of ten general achievement levels.

Levels of Educational Performance and Related Factors: The Fifth Report of the 1970-71 Michigan Educational Assessment Program. Lansing: Department of Education, June, 1972.

This report contains education profiles for Michigan's school districts, schools, and pupils for the 1970-71 educational assessment. It is designed to answer the question of what is the level of basic skills achievement and of other educational assessment measures in Michigan and in Michigan's community types. Examined are the levels of basic skills performance at grades 4 and 7 in communications skills and mathematics and the levels of certain factors (variables) presumed to be related to performance, such as expenditures per pupil average, experience of teachers, etc. Community types are metropolitan core city, city, urban fringe, town, and rural, with the state being the basic frame of reference. Profiles are constructed from district-level mean scores on the assessment measures, school-level mean scores, and individual pupil scores.

Distribution of Educational Performance and Related Factors: The Sixth Report of the 1970-71 Michigan Educational Assessment Program. Lansing: Department of Education, June, 1972.

This report contains a series of educational distribution profiles for the state as a whole, prepared from the 1970-71 assessment results, in order to determine whether certain student and school measures (such as school financial resources, staffing resources, etc.) bear a relationship to pupils' levels of basic skills achievement in the state's schools. It determines the relationship of students' background characteristics to their achievement level, to the levels at which their schools are supported, and to teacher characteristics.

Educational Assessment and District Enrollment in Michigan: The Seventh Report of the 1970-71 Michigan Educational Assessment Program. Lansing: Department of Education, June, 1972.

The report contains education tables for groups of Michigan school districts, divided on the basis of district size, designed to answer the question of whether school districts with different enrollment sizes score differently, as a group, on the Michigan assessment variables. For the 1970-71 assessment, size, as a basis for classifying districts, took the place of the geographic regions used in the 1969-70 assessment.

Technical Report: The Ninth Report of the 1970-71 Michigan Educational Assessment Program. Lansing: Department of Education, June, 1972.

The primary function of this report is to present the technical information needed to evaluate the instruments and techniques used to measure and report the status of student achievement and attitude in the 1970-71 assessment program. The first section briefly describes the 1970-71 assessment program. The second section describes the assessment battery and contains two subsections that deal with its noncognitive and cognitive parts. Each subsection explains the instruments involved, the derivation of reported scores, and the psychometric properties of the measures.

Objectives and Procedures: The First Report of the 1971-72 Michigan Educational Assessment Program. Lansing: Department of Education, October, 1971. ERIC ED 059 257.

The purpose of this report is to provide local school district officials with information about the 1971-72 Michigan Educational Assessment Program, its objectives, and the procedures that will be followed. Presents the six basic elements of an analysis process adopted by the State Board as the accountability model for Michigan.

Kearney, C. Philip. *The Michigan Educational Assessment Program.* Lansing: Department of Education, November 1, 1971.

This is an address given by Dr. Kearney, Associate Superintendent of Public Instruction, before the U.S. Senate Select Committee on Equal Educational Opportunity, in which he described the Michigan Educational Assessment Program from the time it was first conceived and implemented in 1969-70, through the operation of the program in 1970-71, and the objectives and procedures of the 1971-72 year of the program.

Individual Pupil Report: Explanatory Materials: The Second Report of the 1971-72 Michigan Educational Assessment Program. Lansing: Department of Education, April, 1972.

The purpose of this report is to provide local school officials with information regarding the performance on basic skills achievement of each student who took the 1971-72 assessment battery, as well as with information that will assist the officials in understanding and interpreting their students' scores. The content of each test is described, cautions to be used in interpretation are provided, how to interpret the materials is explained, and statistical terms used in the program are defined.

Local District and School Report: Explanatory Materials: The Third Report of the 1971-72 Michigan Educational Assessment Program. Lansing: Department of Education, May, 1972. ERIC ED 059 255.

This report provides local school district officials with the 1971-72 assessment results of their own school district and its schools for the purpose of assisting them in making local decisions about the allocation of resources and the design of educational programs. The report gives a general indication of the areas within the local district that may need closer study. It contains precautions to be used in interpreting the data; lists the assessment measures and introduces the computer print-outs containing local district and school data; describes the norm tables in the report; and explains how to construct and interpret district-level and school-level education profiles.

Local District Results: The Fourth Report of the 1971-72 Michigan Educational Assessment Program. Lansing: Department of Education, September, 1972.

This report provides the public with information regarding the average scores on the educational assessment measures of all public school districts in Michigan involved in the 1971-72 assessment program. Areas within the local district which may need closer study are indicated.

Technical Report: The Fifth Report of the 1971-72 Michigan Educational Assessment Program. Lansing: Department of Education, November, 1972.

This report provides technical information needed to evaluate the instruments and techniques used in the 1971-72 assessment program. The report describes how the basic skills instruments were developed (word relationships, reading, mechanics of written English, and mathematics) and how they were reported, as well as the composite estimate of socioeconomic status.

The Equating Report: Year-To-Year Analysis of the Cognitive Tests of the Michigan Educational Assessment Program, 1970-72. Lansing: Department of Education, March, 1973.

The purpose of this report is to provide information and data with which state and local educators can analyze the achievement data of the assessment program on a year-to-year basis and on a state, local district, or school basis. A discussion of the need for equating test scores and of the general procedures by which equating is done is presented in the first section. The second section discusses in detail the equating of the assessment achievement tests from 1970 through 1972. The final section presents the cautions and limitations inherent in the equating processes.

Objectives and Procedures: The First Report of the 1972-73 Michigan Educational Assessment Program. Lansing: Department of Education, October, 1972.

This report restates the objectives of the Michigan Educational Assessment Program for the 1972-73 school year; projects the future long-range plans for the information and planning of local districts and state officials; and indicates in some detail the specific procedures to be followed in the 1972-73 program.

Individual Pupil Report: Explanatory Materials: The Second Report of the 1972-73 Michigan Educational Assessment Program. Lansing: Department of Education, March, 1973.

This report provides local school officials with information regarding the performance on basic skills achievement of each student who took the 1972-73 Michigan Educational Assessment battery and gives information that will assist the officials in understanding and interpreting their students' scores. The first section describes the content of each test (word relationships, reading, mechanics of written English, and mathematics). The second section presents cautions to be used in the interpretation of individual pupil scores from the program. The third section describes the materials that accompany the report and explains pupil scores that they contain. The final section defines statistical terms used in the program and provides technical information about the assessment battery.

Local District & School Report: Explanatory Materials: The Third Report of the 1972-73 Michigan Educational Assessment Program. Lansing: Department of Education, March, 1973.

The report provides local district officials with information to enable them to understand and utilize the local district and local school reports provided by the Michigan Educational Assessment Program for the testing period of January, 1973. The report is accompanied by the data sheets and norm tables sent to each district and is intended to facilitate their use. By following procedures given in the report, local school district officials can construct education profiles that will enable them to relate assessment results for their district and schools to results obtained by groups of other districts and schools throughout the state and in the same community. Officials can identify levels of educational performance in selected basic skills and levels of selected non-achievement measures in their schools and district.

Technical Report: The Fifth Report of the 1972-73 Michigan Educational Assessment Program. Lansing: Department of Education, March, 1974.

The report provides the technical information needed to evaluate the instruments and techniques used in the 1972-73 assessment program. It is intended primarily for directors of research, research consultants, and school counselors.

Assessment Administration Manual, Michigan Educational Assessment Program, 1973-74. Grade 4, Year 5. Lansing: Department of Education.

New objective-referenced tests were used for the 1973-74 Michigan Educational Assessment Program, and this manual describes the procedures to be used to administer the tests to grade 4 pupils.

Assessment Administration Manual. Michigan Educational Assessment Program, 1973-74, Grade 7, Year 5. Lansing: Department of Education.

This manual describes the procedures to be used to administer tests to grade 7 pupils for the 1973-74 Michigan Educational Assessment Program. It involves new objective-referenced tests requiring different procedures for administration.

Local and Intermediate District Coordinator's Manual: The 1973-74 Michigan Educational Assessment Program. Lansing: Department of Education.

This manual instructs the local and intermediate district coordinators in the procedures necessary for administering the 1973-74 assessment to grades 4 and 7 pupils in the subject areas of reading and mathematics.

School Coordinator's Manual: 1973-74 Michigan Educational Assessment Program. Lansing: Department of Education.

This manual instructs the school coordinators in the procedures necessary for administering the assessment instrument to grades 4 and 7 pupils in the subject areas of reading and mathematics in 1973-74.

Instructions for Administering the Pupil Attitude Questionnaire: Michigan Educational Assessment Program, 1973-74. Lansing: Department of Education.

This report contains instructions for administering the pupil attitude questionnaire used in the 1973-74 Michigan Educational Assessment Program. The school districts participate on a voluntary basis under one of three options: involves all fourth and seventh graders; involves only all fourth graders; involves only all seventh graders.

Michigan's New 'Teacher Aid'. Brochure. Lansing: Department of Education.

This is a small brochure which summarizes the changes in the new state assessment tests to be administered in the 1973-74 school year. The tests now are objective-referenced instead of norm-referenced, and performance will be compared to objectives. Detailed information will be presented for individual students. Grades 4 and 7 will be tested in reading and mathematics.

Objectives and Procedures, 1973-74 Michigan Educational Assessment Program, First Report. Lansing: Department of Education, August, 1973.

This report contains the objectives and procedural aspects to be followed during the 1973-74 assessment program in which objective-referenced testing was introduced for the first time. It describes how the performance objectives and objective-referenced tests were developed. Appendixes contain mathematics and reading objectives to be measured in the 1973-74 program for grades 4 and 7.

Individual Student and Classroom Reports: Explanatory Materials, 1973-74, Michigan Educational Assessment Program, Second Report. Lansing: Department of Education, 1974.

This guide was prepared to help educators interpret the information provided for individual students and for classroom groups that resulted from Michigan's Educational Assessment Program conducted in 1973-74 in the subject areas of mathematics, reading, and word relationships. Objective-referenced instruments were used for the mathematics and reading tests; a norm-referenced measure for word relationships. Grades 4 and 7 were tested. The tests are described, and aids in interpreting the information contained in the reports are provided. The objectives for the mathematics and reading tests are presented in the Appendix.

School and District Reports: Explanatory Materials, 1973-74, Michigan Educational Assessment Program, Third Report. Lansing: Department of Education, 1974.

This is an explanatory report to assist in the interpretation of local and school district summary reports provided by the 1973-74 assessment program. Educational assessment measures used in the 1973-74 program are described, and the Appendix contains a listing of the mathematics and reading performance objectives for grades 4 and 7.

State Summary of Results, 1973-74, Michigan Educational Assessment Program, Fourth Report. Lansing: Department of Education, 1974.

This summary presents a compilation of the scores of the state's fourth and seventh grade students who participated in the 1973-74 assessment program, the first year objective-referenced test items were used in Michigan.

Objectives and Procedures, 1974-75: The First Report of the 1974-75 Michigan Educational Assessment Program. Lansing: Department of Education, August, 1974.

The objectives and procedural aspects of the 1974-75 core assessment program are described in the first report of the 1974-75 series, as well as the first grade pilot assessment introduced at this time and new test items developed for selected science and mathematics objectives which will be tested in a sample of fourth and seventh grade students. Lists of performance objectives in reading, mathematics, and science for grades 4 and 7 and the preprimary objectives are given in the Appendix.

State Summary of Results, 1974-75, Michigan Educational Assessment Program, Fourth Report. Lansing: Department of Education, March, 1975.

The report presents a compilation of the scores of the fourth and seventh grade students who participated in the objective-referenced assessment program during 1974-75. The report delineates the purpose of the assessment program, makes some comparisons with 1973-74 data, and discusses the possible meaning and significance of the results.

Grade 4 Assessment Administration Manual: Michigan Educational Assessment Program, 1974-75. Lansing: Department of Education, 1974.

This manual describes for the test administrator the preparations necessary prior to testing and the procedures for administration of the assessment instruments to grade 4 in the 1974-75 program.

Grade 7 Assessment Administration Manual: Michigan Educational Assessment Program, 1974-75. Lansing: Department of Education, 1974.

This manual describes for the test administrator the preparations necessary prior to testing and the procedures for administration of the assessment instruments to grade 7 in the 1974-75 program.

School Coordinator's Manual: Michigan Educational Assessment Program, 1974-75. Lansing: Department of Education, 1974.

This manual outlines for the school coordinator of the assessment program the procedures necessary for administering the assessment instruments in the coordinator's school. It also contains information to assist the coordinator in arranging optimal testing conditions for the students.

Local and Intermediate District Coordinator's Manual: Michigan Educational Assessment Program, 1974-75. Lansing: Department of Education, 1974.

This manual outlines for the district coordinators the procedures necessary for administering the assessment instruments in their districts and assists them in arranging optimal testing conditions for their students.

Michigan's Educational Assessment Program: Grades to be Assessed. Lansing: Department of Education, January, 1974.

This report clarified the State Board of Education's policy and thinking regarding the grades or levels to be included in present and future educational assessment plans. A tentative timetable for implementing the assessment of grades 1, 4, 7, 10, and 12 is included, beginning with 1973-74 and carried through the 1977-78 school years.

The Long Range Plan of the Michigan Educational Assessment Program. Final Draft. Lansing: Department of Education, 1974.

This is a final draft of Michigan's long-range plan for the educational assessment program that was presented to the State Board of Education for approval. It projects a general outline of development for the next five to ten years and is meant to be a flexible plan subject to revision, if necessary. Chapter I contains background information about the program and its relationship to the six-step Michigan Accountability model. Chapter II states the purpose and eight goals of the Michigan state assessment program. Chapter III describes the learning areas to be assessed, the grade levels and students to be included in the program, and the time schedule for implementing the various components of the program. The core assessment and sampling components of the program are explained. Chapter IV presents procedures for the development and/or revision of the performance objectives and test items. Chapter V discusses data collection and analysis. The sixth chapter covers reporting and dissemination procedures.

Assessment Coordinator's Feedback Survey. Lansing: Department of Education, February, 1974.

This report contains the results of a survey of the local school district assessment coordinators conducted by the Michigan assessment staff to gather information about the success of the Michigan assessment procedures. The survey took place following the first year of objective-referenced testing in 1973-74 by Michigan. Previously, norm-referenced testing was conducted. Results of the survey were to be used in designing the 1974-75 program. The overall response to the survey was favorable. The most often-mentioned informational need was in the area of interpretation of the results, and the most serious difficulty encountered was in the area of scheduling tests and make-ups.

Educational Assessment, the Michigan Plan. Lansing: Department of Education, February, 1975.

This document describes the 1974-75 educational assessment in concise, easy-to understand terms and explains exactly what kind of information is generated from the assessment for the local and state educational decision makers. Future plans for expanding the assessment program also are discussed.

Objectives and Procedures, 1975-76: The First Report of the 1975-76 Michigan Educational Assessment Program. Lansing: Department of Education, July, 1975.

This report presents the objectives of the assessment program and indicates in detail some of the specific procedures to be used in the current year, 1975-76. In addition to the core assessment of grades 4 and 7 in reading and mathematics, experimental items were tried out in grades 4 and 7 in the subject areas of reading, mathematics, and health. The first grade pilot assessment was continued in 1975-76, and a limited pilot project was introduced for grade 10 in reading and mathematics. The experimental items and the first grade pilot assessed all the students in the specified grades in a sample of schools. The tests for the tenth grade assessment were administered to a group of volunteer high schools.

PERFORMANCE OBJECTIVES, DEVELOPMENT OF

Developing Performance Objectives. Lansing: Department of Education, 1972.

One of the six steps in Michigan's accountability model is the development of performance objectives. This booklet describes the six-step accountability model and how performance objectives fit into the model; defines what performance objectives are and the difference between goals and performance objectives; and explains, with concrete examples, how to develop the objectives.

The Developmental Process for Performance Objectives In Reading and Mathematics. Lansing: Department of Education, no date.

This article is a two-page summary of the process followed by Michigan from the fall of 1971 to 1973 for developing performance objectives in reading and mathematics.

DEVELOPMENT OF TEST INSTRUMENTS

Development of Test Items and Instruments in Reading and Mathematics for the 1973-74 Michigan Educational Assessment Program. Staff working draft of test development. Lansing: Department of Education, January, 1974.

This report describes the process of developing the objective-referenced tests used in the 1973-74 Michigan Educational Assessment Program. It explains the overall procedures followed in developing performance objectives in reading and mathematics; the selection, training, and supervision of test item writers; the validation of the test items; and the selection of the objectives and the test items for the 1973-74 program.

A Report on the Technical Characteristics of the Reading and Mathematics Instruments of the 1973-74 Michigan Educational Assessment Program. Submitted to the Michigan Department of Education by Research Triangle Institute. Lansing: Department of Education, April 12, 1974.

Research Triangle Institute assessed the technical quality and adequacy of the reading and mathematics assessment instruments used in the 1973-74 assessment program at the level of the individual performance objective. The 1973-74 assessment program is described briefly. The reliability and content validity of the instruments are examined, analysis of the significance of test length and passing score is provided, and information useful for the interpretation of results is included.

DISSEMINATION METHODS

The Michigan Assessment of Education, 1969-70: The Politics of Reporting Results. Lansing: Department of Education, February, 1971. ERIC ED 048 366.

This article is a detailed and candid account of the difficulties the Michigan Department of Education encountered following the first assessment program in 1969-70 because of gubernatorial and legislative pressures to report individual pupil results.

Bettinghaus, Erwin P. and others. *Keeping the Public Informed: Accent on Accountability*. Denver: Cooperative Accountability Project, 1973. ERIC ED 095 214.

This is a digest of a more detailed report which develops a dissemination model for educational accountability programs. It was prepared for the Cooperative Accountability Project by the State of Michigan, one of the seven state members of CAP. The digest explains the four basic steps to be taken to accomplish an effective accountability communication program and includes tips for working with the news media. Several observations about the communication process and three basic theories about communications are discussed.

Bettinghaus, Erwin P. and G. R. Miller, Michigan State University. *Part I, Reactions to State Accountability Programs: A Dissemination System for State Accountability Programs*. Denver: Cooperative Accountability Project, June, 1973. ERIC ED 111 841.

The first of a three-part report, prepared by the State of Michigan for the Cooperative Accountability Project, offers a dissemination model for educational accountability programs. The model outlines potential strategies for the appropriate reporting of the results obtained from the application of several educational accountability models. This part of the report examines current and past accountability models along with the reactions of various publics to those models.

Bettinghaus, Erwin P. and G. R. Miller, Michigan State University. *Part II, The Relationship of Contemporary Communication Theory to Accountability Dissemination Procedures: A Dissemination System for State Accountability Programs*. Denver: Cooperative Accountability Project, June, 1973. ERIC ED 111 842.

The second part of a three-part report, prepared by the State of Michigan for the Cooperative Accountability Project, offers a dissemination model for educational accountability programs. This part examines current dissemination policies within the framework of contemporary communication theory to develop a rationale for the construction of an appropriate dissemination model.

Bettinghaus, Erwin P. and G. R. Miller, Michigan State University. *Part III, Developing Dissemination Procedures for State Accountability Programs*. Denver: Cooperative Accountability Project, June, 1973. ERIC ED 111 843.

The third part of the three-part report, prepared by the State of Michigan for the Cooperative Accountability Project, offers a dissemination model for educational accountability programs. Part III outlines a dissemination program and specifies its relationship to educational accountability.

Bettinghaus, Erwin P., Michigan State University. *Final Report, Preliminary Field Study: Dissemination of Educational Accountability*. Denver: Cooperative Accountability Project, 1974. ERIC ED 091 840.

This report describes a limited test of the potential dissemination model prepared by Michigan for the Cooperative Accountability Project which took place from January 1, 1974, to March 30, 1974. The aim of the test was to investigate the reactions of participants at the local level in an attempt to train them to disseminate elements of the model. Included is an evaluation of the project, the project's accomplishments, a budget analysis of the project, and recommendations for future efforts in this area. Materials produced for the project are in the Appendix.

ADDITIONAL REFERENCES

Where Research, Evaluation and Assessment Fit In. Lansing: Department of Education, April, 1973.

This report describes the goals and major activities of the Research, Evaluation and Assessment Service of the Michigan Department of Education and its relationship to Michigan's six-point educational accountability process.

A Survey of Views Concerning Michigan's Fourth Grade Assessment Program, 1973-74. East Lansing: Michigan Education Association, 1974.

The Michigan Education Association surveyed a sample of fourth grade teachers in 1974 in Michigan school districts to obtain their views, participation in, and use of the 1973-74 fourth grade assessment.

Report and Recommendations of the MEA Tast Force on Assessment and Accountability. East Lansing: Michigan Education Association, March, 1974.

This report presents the Michigan Education Association's position on accountability, assessment, behavioral objectives, and compensatory education in the state and is generally critical of the Department of Education's assessment program.

House, Ernest; Wendell Rivers; and Daniel Stufflebaum. *An Assessment of the Michigan Accountability System.* East Lansing: Michigan Education Association, March, 1974.

This report examines the Michigan Accountability System with particular emphasis on the assessment program. Reservations and disagreement are expressed about the minimal objectives, the validity of the tests, the publishing of a book of performance objectives, the desirability of every-pupil testing, and the tying of funds to gains in test scores. Nine recommendations are included.

A Staff Response to the Report: An Assessment of the Michigan Accountability System. East Lansing: Michigan Education Association, May, 1974.

The Michigan Department of Education responded to the House, Rivers, and Stufflebaum report, *An Assessment of the Michigan Accountability System*, and the nine recommendations of the panel, three of which the Department of Education staff did not accept. The staff response addresses each of the issues raised by the panel and attempts to correct errors in the panel's report, point out differences in philosophy between the Department of Education and the panel, and to indicate areas of basic agreement with the panel's suggestions.

Murphy, Jerome T. and David K. Cohen. "Accountability in Education—The Michigan Experience." *The Public Interest*, Number 36, Summer, 1974.

This discussion is about accountability and assessment as practiced by Michigan which was written because of the state's extensive experience in this area. The report is a critical one and provides some indications of the way accountability works in the authors' views and some suggestions about the relation between scientific and political control in education.

Survey on Educational Accountability for the Michigan State Department of Education. Detroit: Market Opinion Research, May, 1974.

This report describes how Michigan residents and the state's public school teachers perceive the concept of educational accountability; who, in the public's view, should have the responsibility for making Michigan's public schools accountable to the citizens; and whether the citizens feel their schools are accountable to them. Recommendations are included for improvement in the understanding of accountability and the six-step accountability model of Michigan. A concluding part of the report is entitled *The Observations and Conclusions of the Superintendent of Public Instruction.* These observations and conclusions were reached by Superintendent John W. Porter and sent to the State Board of Education, and they were based upon his review and study of the survey. The four conclusions contain 16 recommendations for the purpose of clearing up the ambiguity and vagueness that surrounds the meaning of the term, "educational accountability;" alleviating the concern and opposition directed toward accountability systems; assisting the local districts in implementing the six-step accountability process; and providing teachers and administrators with the skills necessary to develop and implement accountability-based strategies.

Womer, Frank B. *Developing a Large Scale Assessment Program.* Denver: Cooperative Accountability Project, 1973, ERIC ED 084 641.

This report is a product of the Cooperative Accountability Project from the State of Minnesota, one of the CAP member states. It contains a wealth of practical information concerning the establishment of an assessment program at the state and local district levels and about assessment as an aspect of accountability. It suggests specific action steps that should be taken to determine what and how much the students are learning, along with the procedures to be followed to bring about improvements. Assessment is clearly defined and how to go about the many planning tasks in assessement is delineated: determining the administrative structure; types of assessment outcomes; types of test instruments; reporting categories and reporting policies; population to be tested; whether sampling is to be used; data collection methodology; data analysis strategy; costs and alternatives; and time schedules. Other clearly described subjects are the development of assessment objectives; the use of existing instruments; the development of new instruments; selection of a sample; collection of data; processing of results; utilization of results; and dissemination activities. Also included are checkpoints for evaluating a quality assessment program and the outlines of five state assessment programs in operation in Minnesota, Texas, Pennsylvania, Florida, and Michigan.

SECTION V.

APPENDIX B. COPIES OF LEGISLATIVE ACTS OF THE FOUR STATES

(Colorado, Connecticut, Florida, and Michigan)

Colorado

TITLE 22, ARTICLE 7, *COLORADO REVISED STATUTES*, 1971

123-41-1. Short title. This article shall be known and may be cited as the "Educational Accountability Act of 1971."

123-41-2. Legislative declaration. (1) The general assembly hereby declares that the purpose of this article is to institute an accountability program to define and measure quality in education, and thus to help the public schools of Colorado to achieve such quality and to expand the life opportunities and options of the students of this state; further, to provide to local school boards assistance in helping their school patrons to determine the relative value of their school program as compared to its cost.

(2) (a) The general assembly further declares that the educational accountability program developed under this article should be designed to measure objectively the adequacy and efficiency of the educational programs offered by the public schools. The program should begin by developing broad goals and specific performance objectives for the educational process and by identifying the activities of schools which can advance students toward these goals and objectives. The program should then develop a means for evaluating the achievements and performance of students. It is the belief of the general assembly that in developing the evaluation mechanism, the following approaches, as a minimum, should be explored:

(b) Means for determining whether decisions affecting the educational process are advancing or impeding student achievement;

(c) Appropriate testing procedures to provide relevant comparative data at least in the fields of reading, language skills and mathematical skills;

(d) The role of the department of education in assisting school districts to strengthen their educational programs;

(e) Reporting to students, parents, boards of education, educators, and the general public on the educational performance of the public schools and providing data for the appraisal of such performance; and

(f) Provision of information which could help school districts to increase their efficiency in using available financial resources.

123-41-3. State board of education—duties. (1) (a) The state board of education shall develop a state accountability program, which:

(b) Describes and provides for implementation of a procedure for the continuous examination and improvement of the goals for education in this state.

(c) Identifies performance objectives which will lead directly to the achievement of the stated goals.

(d) Adopts a procedure for determining the extent to which local school districts accomplish their performance objectives. Evaluation instruments, including appropriate tests, shall be developed under the authority of this article to provide the evaluation required, but standardized tests shall not be the sole means developed to provide such evaluation.

(e) Recommends a procedure and timetable for the establishment of local accountability programs.

(2) The state board of education shall adopt rules and regulations for the implementation of this article.

(3) (a) There is hereby created an advisory committee to the state board of education, which shall consist of seventeen members to be selected in the manner and for the terms provided in this subsection (3). The advisory committee shall assist the state board of education in performing its duties under this article.

(b) (i) Three of the members of the advisory committee shall be appointed by the speaker of the house of representatives, of which no more than two shall be from each of the major political parties; and two of the members of the advisory committee shall be appointed by the president of the senate, one from each of the major political parties.

(ii) Five members of the advisory committee shall be appointed by the governor from among those persons who are currently serving or have served as members of boards of education in this state.

(iii) Seven members of the advisory committee shall be appointed by the state board of education, three of which shall be classroom teachers and three of which shall be public school administrators.

(4) The terms of office of members of the advisory committee shall be three years; except that of the members appointed under subsection (3) (b) (i) to take office on July 1, 1971, two members shall be appointed for one-year terms, two members shall be appointed for two-year terms, and one member shall be appointed for a three-year term; of the members appointed under subsection (3) (b) (ii) to take office on July 1, 1971, two members shall be appointed for one-year terms, one member shall be appointed for a two-year term, and two members shall be appointed for three-year terms; and of the members appointed under subsection (3) (b) (iii) to take office on July 1, 1971, two members shall be appointed for a one-year term, two members shall be appointed for two-year terms, and three members shall be appointed for three-year terms. Vacancies shall be filled by appointment, in the same manner as original appointments, for the unexpired term.

(5) The advisory committee shall elect a chairman from among its members. The members of the advisory committee shall receive no compensation for their services on the committee but shall be reimbursed for their actual and necessary expenses incurred in the performance of their duties on the committee.

(6) The department of education shall make available to the advisory committee such data, facilities, and personnel as are necessary for it to perform its duties.

123-41-4. Local accountability programs. (1) The board of education of each school district in the state shall adopt a plan for a local accountability program designed to measure the adequacy and efficiency of educational programs offered by the district. The board shall appoint an advisory accountability committee which shall make recommendations to the board relative to the program of accountability but it shall be the responsibility of the board to implement the provisions of this section. The advisory accountability committee shall consist of at least one parent, one teacher, one school administrator, and a taxpayer from the district.

(2) The board of education of each district shall report not later than December 31 of each year to the residents of the district, and to the state board of education, on the extent to which the district has achieved its stated goals and objectives. The report shall also contain an evaluation of educational decisions made during the previous year which have affected school services and processes.

(3) The state board of education shall assist local boards of education in the preparation of the district goals and objectives and the procedures for measuring school district performance in reaching those goals and objectives.

123-41-5. Reports. Not later than March 1, 1972, and each year thereafter, the state board of education shall transmit to the general assembly a report of its activities in developing and administering the educational accountability program, including the progress of the state and local school districts toward the achievement of their respective goals and objectives. The state board of education shall also recommend any legislation which it deems necessary for the improvement of educational quality in this state.

Section 2. Effective date. This act shall take effect July 1, 1971.

Section 3. Appropriation. In addition to any other appropriation, there is hereby appropriated out of any moneys in the state treasury not otherwise appropriated, for the fiscal year beginning July 1, 1971, to the department of education, the sum of forty thousand dollars ($40,000), or so much thereof as may be necessary for the administration and implementation of this act.

Section 4. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

TITLE 22, ARTICLE 44, PART 2, *COLORADO REVISED STATUTES*, 1973

AN ACT AMENDING THE "PROGRAM PLANNING, BUDGETING, AND EVALUATING SYSTEM (PPBES) ACT."

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. Article 42 of chapter 123, Colorado Revised Statutes 1963 (1971 Supp.), is repealed and reenacted, with amendments, to read:

123-42-1. Short title. This article shall be known and may be cited as the "Financial Policies and Procedures Act."

123-42-2. Legislative declaration. It is the purpose of this article to develop for the public schools a program-oriented budget format which will relate anticipated costs and actual costs to designated programs.

123-42-3. Adoption and compatibility of handbook. (1) The state board of education shall have the authority to adopt a financial policies and procedures handbook that will meet the needs of the existing statutes and of such other rules and regulations as may be necessary to fulfill the intent of this article.

(2) The financial policies and procedures handbook so adopted shall be compatible with the provisions of the "Accountability Act of 1971," but shall be limited primarily to the relating of budgeted and actual costs to designated programs.

123-42-4. Establishment of system by school districts. (1) The state board of education shall prepare a first draft of the financial policies and procedures handbook and shall send at least one copy thereof to each school district in the state no later than September 1, 1973.

(2) The state board of education shall designate not less than five volunteer school districts which are representative as to pupil size and population to cooperate in finalizing a financial policies and procedures handbook during the 1974 budget year.

(3) The state board of education shall prepare a final draft of the financial policies and procedures handbook and shall send at least one copy thereof to each school district in the state no later than July 1, 1975. The financial policies and procedures handbook shall be fully implemented on January 1, 1976 by all school districts having a school population of over one hundred students.

123-42-5. Reports. Beginning on or before February 15, 1976, and continuing on or before each February 15 and August 15 thereafter, the secretary of the board of education of each school district shall file with the state board of education a semiannual report of receipts and expenditures of each fund with designated program reports in accordance with the state board's adopted financial policies and procedures handbook.

123-42-6. Administration. This article shall be administered by the state board of education. The state board of education shall have the authority to adopt reasonable rules and regulations for the administration of this article.

Section 2. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

RULES
EDUCATIONAL ACCOUNTABILITY ACT OF 1971
(Approved by the Attorney General of Colorado in September, 1975)

2207-P-1.0 Definitions

1.01 **Charge:** A statement of purpose from local boards to local accountability committees. The statement should cover the areas a board desires the committee to accomplish for the purpose of providing assistance and support to the district's accountability program.

1.02 **Cost:** The amount of money and resources used in the accomplishment of a program as structured and defined by the local district.

1.03 **District:** A Colorado school district organized and existing pursuant to the law but not including a junior college district.

1.04 **Educational Accountability:** A practical and logical process for looking at education and its benefit to students in an objective manner. The process asks the districts to establish educational goals, determine objectives, design and implement a plan that will work toward the attainment of the objectives, design and implement a procedure for evaluating accomplishments of the programs, and use the information coming from the evaluation in planning, budgeting, and decision-making. The process includes reporting the accomplishments and costs of programs to the public.

1.05 **Educational Accountability Programs:** The plan for the process defined in 1.04 which defines, measures, and evaluates quality in education. The design of the program should provide for the identification, gathering, analysis, reporting, and use of information in the planning, budgeting, and decision-making activities of a district.

1.06 **Evaluation:** A continuous procedure for appraising the accomplishments of objectives.

1.07 **Goals:** General and timeless statements describing what a district desires to provide for its students. Goals state the broad purpose and direction around which a district designs educational programs.

1.08 **Local Board:** The local board of education for a school district.

1.09 **Major Educational Decision:** A course of action determined by the local board that has a significant impact on existing programs, initiates new programs, or affects school services and processes.

1.10 **Program:** A set of interrelated procedures and activities designed by the districts to achieve their stated goals and objectives over a period of time. The parts of a program include but are not limited to instructional and support activities, methods of instruction, staffing patterns, resources, and the use of curriculum, policy, and other variables as may be applicable.

1.11 **Report:** The description by the local board to the citizens summarizing the accomplishments and costs of the district's educational program and the impact of major educational decisions on student learning. The report should be in a format and vocabulary understandable by lay citizens.

1.12 **Resources:** An available source of supply, support, or assistance. Resources may be personnel, finances, facilities, equipment or materials.

1.13 **Staff Objectives:** Statements describing in measurable or observable terms what the school district personnel will accomplish to support the learning outcomes given in the student outcome objectives. The objectives define the quality in management, organization and planning a staff should provide for learning programs. They are flexible and can be changed or modified.

1.14 **State Board:** The Colorado Board of Education composed of elected representatives from the Congressional Districts within Colorado.

1.15 **Student Outcome Objectives:** Statements describing a learning outcome in measurable or observable terms that will be worked toward by the student. The objectives define the quality in learning from the educational programs. They are flexible and can be changed or modified.

2207-R-2.0 Local Boards

2.01 **Educational Accountability Program:** The local board of each district shall develop and adopt an educational accountability program based on student and educational needs for that district.

2.02 **Educational Plan:** The district's plan for its educational accountability program shall be reviewed, up-dated, and any revisions in the plan adopted by the local board on or before July 15 of each year.

2.03 **Resources for Plan:** In applying accountability to budgetary process, the local board shall develop the capability and the responsibility to account for the expenditure of money and the commitment of other resources in terms of the results achieved by its educational accountability program. This involves both the stewardship of money and other resources and the evaluation of achievement in relation to specified objectives and goals. The format should be in accordance with the Financial Policies and Procedures Handbook as prescribed by the Financial Policies and Procedures Act (22-44).

2.04 **Evaluation of Plan:** The local board of each district shall design, adopt, and carry on an evaluation procedure that is consistent with the accountability process. The evaluation procedure should be used to assist the district in identifying the strengths and weaknesses of its educational programs, its objectives, and its goals. The information and facts gathered through the procedure should be used to formulate appropriate educational decisions in planning and budgeting.

2.05 **Report to State Board:** On or before June 15 of each year the local board shall report to the State Board on its educational accountability program for the previous academic year. Local boards may submit an application to the State Board requesting a thirty to sixty-day extension of the reporting date. This report shall include the extent to which the district has achieved its stated goals and objectives and an analysis of educational decisions made during the previous school year which have affected school programs, services, and processes. The reporting form will be provided by the Colorado Department of Education.

2.06 **Report to Citizens:** On or before December 31 of each year, the local board shall report to its citizens. The report shall include the extent to which the district has achieved its stated goals and objectives, the cost of programs, and an analysis of educational decisions made during the previous school year which have affected school programs, services, and processes. The format of this report is the option of the local district and may include but shall not be limited to the state report as described in 2.06 of these rules.

2207-R-3.0 Local Accountability Advisory Committee

3.01 **Appointment and Responsibility:** The local board, upon the advice of the superintendent, shall appoint members to the local accountability advisory committee. Membership of the local committee shall be reported to the State Board through the annual accountability report. The committee shall serve as an advisory body to the local board.

3.02 **Membership:** The local committee shall consist of at least one parent, one property taxpaying resident who does not have children in the district's schools, one teacher, one administrator, and one student* from the district. The local superintendent, or such person as he shall designate, shall serve as a resource member of the committee. The State Board recommends that the local board include representative ethnic and economic groups of persons of both sexes in the composition of the committee.

3.03 **Size and Distribution:** The size of the local committee shall be determined by the local board. The distribution of the total number within the committee shall provide a balance in numbers among the groups represented on the committee.

3.04 **Terms:** The length of term of the members of the local committee shall be established by the local board.

3.05 **Internal Organization:** The local committee shall elect a chairman from among its members and shall establish a schedule of meetings and general rules for its operation. This information shall be filed with the local board. All meetings of the committee shall be publicized through the media, where feasible, at least twenty-four hours in advance and shall be open to the public.

3.06 **Charge from Board:** The local board shall establish for the committee a charge consistent with the purposes of the educational accountability law and send a statement of the charge to the committee. The charge should be revised and up-dated from time to time by the local board.

3.07 **Planning:** The local committee should establish objectives and a plan for itself that will work toward the accomplishment of the charge from the local board.

3.08 **Reporting to Board:** The committee should report to their local board at least twice during the school year on its objectives and plan for accomplishing the charge from the board.

3.09 **District Educational Plan:** The local committee shall recommend to the local board on or before July 15 of each year an educational plan for the continuing development of the accountability process in the district. Local boards may request a thirty-day extension of the plan date.

2207-R-4.0 **Local Accountability Programs**

4.01 **Authorization:** The board of education of each school district, through its superintendent, shall cause to be designed, adopted, implemented, and maintained its educational accountability program as defined in 1.05 of these rules.

4.02 **Review and Revision:** The review and revision by the local board of the district's plan for its educational accountability program shall take place annually but no later than June 15 of each year.

4.03 **Parts of:** The development of an educational accountability program shall consist of the following five sequential phases:

4.03 (1) To develop, analyze, redefine, and improve a statement of goals for the district.

4.03 (2) To identify and prepare statements of student outcome objectives and staff objectives for the district.

4.03 (3) To improve, modify, or develop programs to achieve the student outcome objectives and staff objectives of the district.

*** Attorney General disapproved the inclusion of a student as beyond the power of the State Board of Education to enforce.**

4.03 (4) To determine, evaluate, and report the strengths, weaknesses, accomplishments, and costs of the established programs in terms of the goals, student outcome objectives, and staff objectives of the district.

4.03 (5) To redefine and modify, based on evidence from the evaluation procedure, any of the parts or characteristics of a program through planning, budgeting, and decision-making.

4.04 **Timetable:** The local board shall establish a timetable for the development and operation of its educational accountability program as described in 4.03 of these rules.

4.05 **Roles of Participants:** In designing and implementing the district's educational accountability program, the board, its superintendent, and its local committee shall work through the district's professional staff of administrators and teachers, other citizen advisory groups that may be established by the board, and the community. The functions and responsibilities of participants in using planning and accountability for improving instruction should include but not be limited to the following procedures and activities.

4.05 (1) The administrative portion of the professional staff shall assist and support the superintendent in the implementation of the decisions and procedures needed to facilitate the educational programs; shall provide assistance and support to the teacher portion of the professional staff as it works with the educational programs; shall provide information and recommendations describing the outcomes of the educational programs to the local committee and the local board for use in the planning, budgeting, and decision-making needed to design or improve the educational programs.

4.05 (2) The teacher portion of the professional staff shall assist and support the administrative staff in the implementation of the educational programs; shall work closely with the administrative staff in the planning of educational programs and the formulation of objectives for the programs; shall serve as facilitators for the educational programs in their areas of responsibilities; shall provide information and recommendations about the strengths and weaknesses of programs they work with to appropriate groups for the revision and modification of the programs; shall provide information and recommendations about the strengths and weaknesses of programs to the local committee and the local board for use in the planning, budgeting, and decision-making needed to design or improve the educational programs.

4.05 (3) Channels for communication should be established between the local committee and other board appointed citizen advisory groups when they are dealing with similar or related areas of educational concern.

4.05 (4) The community of the district should be encouraged to express their concerns and desires about the district's educational programs through communication with the local board, the superintendent, or the local committee.

2207-R-5.0 **Colorado Board of Education**

5.01 **State Accountability Program:** The State Board shall recommend procedures for the development of a state accountability program which shall:

5.01 (1) Describe and provide for the implementation of a procedure for the continuous examination and improvement of a set of goals for education in the State of Colorado.

5.01 (2) Cause to be designed and implemented procedures that would assist in identifying those factors or conditions that may influence the attainment of quality in education in the State of Colorado

5.01 (3) Suggest procedures for evaluation within the accountability process that will assist and support the local districts in determining the extent to which student outcome objectives and staff objectives have been accomplished. Evaluation instruments, including appropriate tests, may be developed to assist districts in data collection which can be used in planning, budgeting, and decision-making by the local district. The use of these instruments shall be at the option of the local districts. Standardized tests shall not be the sole means developed to assist the local district in collecting needed information.

5.02 **Support to the State Committee:** The State Board shall provide such data, facilities, personnel, and such budgetary assistance as are necessary for the State Accountability Advisory Committee to perform its duties.

5.03 **Support for Districts:** The State Board shall establish policy and procedures that will assist local boards in the preparation of district goals and objectives and in the design and implementation of an evaluation procedure for measuring the degree of accomplishment of the district's educational program in terms of the goals and objectives.

5.04 **Report to General Assembly:** The State Board shall transmit to the general assembly no later than March 1 of each year a report of its activities in developing and administering the educational accountability program, including the progress of local school districts toward the achievement of their respective goals and objectives. The State Board shall also recommend any legislation which it deems necessary for the improvement of educational quality in this state.

2207-R-6.0 Colorado Department of Education

6.01 **Assistance to Local Districts:** The Colorado Department of Education shall provide assistance and support to the local districts in the development, revision, modification, and maintenance of educational accountability programs.

6.02 **Collection of Available Resources:** The Colorado Department of Education should serve as a resource center for the local districts in the development and use of accountability through finding, collecting, designing, and distributing publications, procedures, and other resources asked for by the local districts. Information should be identified and made available from the districts, the department, other professional groups, other states, or any other source that might assist the local districts.

6.03 **Planning:** The Colorado Department of Education shall use the information reported to the State Board by the local districts in their annual accountability reports to establish priorities and plans for giving assistance and support to the local districts in their accountability efforts.

6.04 **Coordination of Accountability Process:** The Colorado Department of Education shall coordinate and consolidate within the Educational Accountability Law of 1971 requests for the use of the accountability process that may be included in educational legislation or recommendations from the State Board. All such accountability processes should be referred to the State Accountability Advisory Committee for review and comment.

2207-R-7.0 State Accountability Advisory Committee

7.01 **Responsibility to State Board and Colorado Department of Education:** The State Accountability Advisory Committee shall assist the State Board and the Colorado Department of Education in performing their duties as given in the Accountability Law. The committee shall be an advisory body to the State Board and the Colorado Department of Education.

7.02 **Membership and Term:** The membership and terms of office for the State Committee are provided for in the Accountability Law.

7.03 **Planning:** The State Committee shall design and adopt objectives and a plan for its activities by at least July 1 of each year in order to fulfill its obligations to assist the State Board and the Colorado Department of Education in the performance of their duties under the Law.

7.04 **Communication:** The State Committee shall communicate and work closely with the staff of the Colorado Department of Education in carrying out its objectives and plan.

7.05 **Alternative Approaches for Local Districts:** The State Committee and the Colorado Department of Education should work to develop alternative approaches that local districts could adopt or adapt for the development and use of the accountability process. This should be a particular priority in the evaluation and cost benefit analysis portions of the accountability process.

7.06 **Local Districts and Committees:** The State Committee may serve in an advisory capacity to local districts or committees when requested to do so.

Connecticut

TITLE 10, S. 10-4 *CONN. GEN. STAT.*, 1971 (Public Act No. 665)

AN ACT CONCERNING DUTIES OF THE BOARD OF EDUCATION TO EVALUATE THE EDUCATIONAL PROGRAMS OF SCHOOL DISTRICTS WITH THE ADVICE OF A LEGISLATIVE COMMITTEE

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 10-4 of the 1969 supplement to the general statutes is repealed and the following is substituted in lieu thereof: (a) Said board shall have general supervision and control of the educational interests of the state, which interests shall include pre-school, elementary and secondary education, special education, vocational education and adult education; shall provide leadership and otherwise promote the improvement of education in the state, including research, planning and evaluation; shall prepare such courses of study and publish such curriculum guides including recommendations for textbooks, materials and other teaching aids as it determines are necessary to assist school districts to carry out the duties prescribed by law; shall conduct workshops and related activities, including programs of intergroup relations training, to assist teachers in making effective use of such curriculum materials and in improving their proficiency in meeting the diverse needs and interests of pupils; and shall keep informed as to the condition, progress and needs of the schools in the state.

(b) Said board shall submit to the governor, as provided in section 4-60, and to the general assembly, a detailed statement of the activities of the board and an account of the condition of the public schools and of the amount and quality of instruction therein and such other information as will assess the true condition, progress and needs of public education. Said board shall develop or cause to be developed an evaluation and assessment procedure designed to measure objectively the adequacy and efficiency of the educational programs offered by the public schools and shall report on these procedures to the joint standing committee on education of the general assembly by February 15, 1972.

(c) Said board shall also include recommendations for policies and programs designed to improve education and may publish such reports and information concerning the educational interests of the state within its jurisdiction as it deems advisable.

Section 2. This act shall take effect July 1, 1971.

Florida

TITLE 15, *FLORIDA STATUTES ANNOTATED*, S. 230.23, 1970

Section 9. (1) Development of Education Evaluation Procedures.

The commissioner of education shall, no later than March 1, 1971, develop or cause to be developed evaluation procedures designed to assess objectively the educational programs offered by the public schools of this state. The evaluation procedures to be developed shall include such methods as are necessary to assess the progress of students at various grade levels and in the various educational programs of the public schools. The evaluation procedures shall be so constructed and developed as to provide each school district with relevant comparative date to enable district school board members, administrators and the public to more readily appraise educational progress and to effectuate the strengthening of the district's educational program. The evaluation procedure shall provide a uniform evaluation of each school district in this state, and, to the extent possible, be compatible with national procedures for the assessment of progress in education.

(2) Reports.

The commissioner of education shall make a preliminary report to the state board of education and the chairmen of the house and senate education committees by October 1, 1970. The preliminary report shall include the commissioner's proposed budget for implementing the evaluation procedures in the fiscal year 1971-72. This proposed budget shall be included in the legislative budget of the department of education. The commissioner shall make a final report to the state board of education and the legislature by March 1, 1971. The final report shall include the commissioner's recommenuations for the dissemination of the data on educational progress in each school district....

Section 12. This act shall take effect July 1, 1970.

TITLE 15, FLORIDA STATUTES ANNOTATED, S. 229.57, 1974
(Educational Accountability Act of 1971)

A bill to be entitled:

An act relating to education; amending subsections 229.57 (3) and 229.57 (4), Florida Statutes, 1971, to provide procedures to assure comparability between state assessment and national assessment; to limit application of educational accountability program to the subject areas of reading, writing, and mathematics until implementation of this act has been completed in those specific subject areas; to provide that all students will be tested in the third through sixth grade by 1975-76; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Subsections (3) and (4) of section 229.57, Florida Statutes, 1971, are amended to read:

229.57 Educational accountability.—

(3) Educational Accountability Program.—The commissioner of education is directed to implement a program of educational accountability for the operation and management of the public schools, which shall include the following:

(a) Pursuant to subsection 229.053 (2) (e) the commissioner, with the approval of the state board of education, shall, no later than November 1, 1972 and each year thereafter, establish major ultimate, basic, specific, uniform statewide educational objectives for each grade level and subject area, including, but not limited to, reading, writing, and mathematics, in the public shcools.

(b) The commissioner shall develop and administer a uniform, statewide system of assessment based in part on criterion-referenced tests and in part on norm-referenced tests to determine periodically pupil status, pupil progress, and the degree of achievement of established educational objectives. Such system shall include procedures for assuring comparability where appropriate between student performance information collected and reported by this system and national indicators of student performance.

(c) The commissioner shall make an annual public report of the aforementioned assessment results. Such report shall include, but not be limited to, a report of the assessment results by grade and subject area for each school district and the state, with an analysis and recommendations concerning the costs and differential effectiveness of instructional programs.

(d) The school board of each district shall by the 1973-74 school year make an annual public report of the aforementioned assessment results which shall include pupil assessment by grade and subject area for each school in the district. A copy of the district's public report shall be filed with the commissioner of education.

(e) The commissioner, with approval of the state board of education, shall by the 1973-74 school year, develop accreditation standards based upon the attainment of the established educational objectives.*

(4) Implementation.—This section shall apply to the subject area of reading by the 1971-72 school year and the subject areas of writing and mathematics by the 1972-73 school year. No other subject area shall be tested until assessment in the subject areas of reading, writing, and mathematics has been implemented. Such implementation shall include the testing of all third and sixth graders in the state by the 1974-75 school year and of all third through sixth grade students by the 1975-76 school year in the basic areas of reading, writing and mathematics. An interpretation of such test in each school shall be reported in the annual report of school progress.

Section 2. This act shall take effect upon becoming law.

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* The Florida State Legislature discontinued state accreditation in 1975; therefore, this directive is abolished.—Ed.

Michigan

PUBLIC ACT NO. 307 (S. 14 of 1969 Fiscal Act)
(Enacted in August, 1969)

Sec. 14. The department of education shall begin to plan and develop a state program for the purpose of conducting a periodic and comprehensive assessment of educational progress. Such plan shall include procedures for the objective measurement of instructional outcomes among the elementary and secondary school students pursuing the various subjects and courses that commonly comprise school curricula. Such plan shall be made statewide in application among the elementary and secondary schools. Such plan shall include procedures for the presentation of periodic evaluation reports of educational progress for the state.

Also the department of education shall provide for an annual test or tests of pupil achievements in the basic skills. Such test or tests shall provide for the objective measurement of pupil learning outcomes in reading, mathematics, language arts and/or other general subject areas. Such test or tests shall be undertaken at one or more grade levels among elementary and/or secondary school and shall be made statewide in application insofar as is necessary and possible.

PUBLIC ACT NO. 38 (Vol. 18, *Mich. C.L.A.* S. 388. 1081-1086)
(Enacted in 1970)

AN ACT TO PROVIDE FOR ASSESSMENT AND REMEDIAL ASSISTANCE PROGRAMS OF STUDENTS IN READING, MATHEMATICS, AND VOCATIONAL EDUCATION.

The people of the State of Michigan enact:

Sec. 1. A statewide program of assessment of educational progress and remedial assistance in the basic skills of students in reading, mathematics, language arts and/or other general subject areas is established in the department of education which program shall:

(a) Establish meaningful achievement goals in the basic skills for students, and identify those students with the greatest educational need in these skills.

(b) Provide the state with the information needed to allocate state funds and professional services in a manner best calculated to equalize educational opportunities for students to achieve competence in such basic skills.

(c) Provide school systems with strong incentives to introduce educational programs to improve the education of students in such basic skills and model programs to raise the level of achievement of students.

(d) Develop a system for educational self-renewal that would continuously evaluate the programs and by this means help each school to discover and introduce program changes that are most likely to improve the quality of education.

(e) Provide the public periodically with information concerning the progress of the state system of education. Such programs shall extend current department of education efforts to conduct periodic and comprehensive assessment of educational progress.

Sec. 2. (1) The statewide assessment program of educational progress shall cover all students annually at two grade levels in public schools.

(2) The department of education, hereinafter referred to as the department, shall develop and conduct the program, and may utilize the assistance of appropriate testing organizations and/or testing specialist. The program shall expand the current basic skills inventory in grades 4 and 7 coordinated by the department.

(3) The program shall assess competencies in the basic skills and collect and utilize other relevant information essential to the assessment program.

(4) Based on information from the program, students shall be identified who have extraordinary need for assistance to improve their competence in the basic skills.

(5) Information from the program shall be given to each school as soon as possible to assist it in its efforts to improve the achievement of students in the basic skills.

Sec. 3. (1) Based on information from the mathematics, reading and language arts assessment program, the department shall provide remedial assistance programs, as funds are made available by law to school districts to raise competencies in basic skills of students identified pursuant to subsection (4) of section 2. A funded program shall include but not be limited to the following components:

(a) Diagnosis of each student's performance difficulties and the development of an instructional program best suited to his individual needs.

(b) Provision for selection, adaption and installation of instructional systems that take account of individual student needs.

(c) Provision for an evaluation of the program in order to identify changes needed to improve program effectiveness.

(2) The department shall establish guidelines and specifications for the program components. The department shall provide technical assistance to each school district in its implementation of the guidleines and specifications. The department shall conduct such evaluation necessary to provide adequate information for the setting of guidelines.

(3) The department shall provide for preservice and in-service training of staff who would be involved in the school programs.

(4) The department with the cooperation of selected schools shall establish demonstration projects in basic skills.

(5) A remedial assistance program shall be audited as part of its evaluation by an agency independent of the state department of education to facilitate the accountability of each school for its programs.

Sec. 4. A vocational education demonstration program is established in the department of education to develop, test and evaluate the following innovative programs:

(a) A vocational education assessment and counseling system using computer and other automated techniques.

(b) A new career development program to devise curricula and materials for new careers in the labor market.

Sec. 5. (1) The vocational education demonstration program shall be developed and tested in not more than 3 school districts. The department shall formulate plans and rules, select the demonstration districts and develop instruments for measurement of the program. Demonstration programs shall be operated in school districts during the 1971-72 school year.

(2) The department shall evaluate the program and recommend to the governor and the legislature a statewide vocational education assessment, counseling and evaluation program by December 31, 1972.

Sec. 6. The department shall promulgate rules necessary to carry out the provisions of this act, in accordance with and subject to the provisions of Act No. 306 of the Public Acts of 1969, being sections 24.201 to 24.313 of the Compiled Laws of 1949.

This act is ordered to take immediate effect.

C A P PUBLICATIONS

Report Number

1 *Annotated Bibliography of the State Educational Accountability Repository.* Phyllis Hawthorne. Revised February 1976. Wisconsin.

2 *Legislation by the States: Accountability and Assessment in Education.* Phyllis Hawthorne. Revised December 1975. Wisconsin.

4 *State Goals for Elementary and Secondary Education.* Susan Ketchum Ribble. Revised September 1973. Wisconsin. ERIC ED 083747.

5 *Characteristics of and Proposed Models for State Accountability Legislation.* Phyllis Hawthorne and Archie A. Buchmiller. April 1973. Wisconsin ERIC ED 078514

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